



INSPIRE Program

STEM for Social Impact

2024 Program Report

PREPARED BY: KEZIA DEVATHASAN, PROGRAM MANAGER



INSPIRE is a five-year program of **research and community-based innovation** at the University of Victoria that engages science and engineering students from underrepresented groups, including individuals of marginalized genders, Indigenous peoples, members of racialized minorities, people with disabilities, and LGBTQ2S+ individuals. We connect students with mentors from industry and the **Canadian and Asia-Pacific community** to ideate and co-create solutions that address society's most pressing challenges, especially in the area of sustainability. INSPIRE is also a network of like-minded individuals where students are supported by ambassadors and industry mentors in an inclusive learning environment.

The 3rd year of INSPIRE featured its 2024 **Apprentice Garage Program, Youth Engagement** and through **Youth-Led Software Development Workshops in High Schools**. The Apprentice Garage program facilitated five **experiential-learning projects in Victoria, BC, Canada and Kathmandu, Nepal** where diverse students worked on solving real problems affecting local communities, whilst co-creating with local client organizations and industry mentors from local companies to propose inclusive minimum viable products.

Our Mission

- Promote **innovative research opportunities**
- Provide dynamic, collaborative and **experiential learning**
- Engage local and global community challenges
- Foster **respect and reconciliation**
- Develop an inclusive learning environment
- Build a network of like minded individuals and organizations



Our Ideology

INSPIRE is an innovative technology hub dedicated to harnessing **community-based research** and cutting-edge tools to create inclusive and **equitable tech solutions** for a diverse, sustainable future. By bringing together multicultural and multidisciplinary teams, INSPIRE fosters collaboration that addresses real-world challenges through emerging technologies and shared expertise. Through hands-on, experiential learning and meaningful community engagement—both locally and globally—INSPIRE promotes mutual respect, reconciliation, and inclusive relationships. This approach ensures that our technology-driven strategies not only reflect the richness of diverse perspectives, but also contribute to building resilient, sustainable societies for everyone.

INSPIRE Program Sponsors

INSPIRE's financial sponsors, educational, and community partners helped us create the community as well as projects that we have today. The program's executive team as well as all of its participants are extremely grateful for each and every one of our sponsors.

PARTNERS

EDUCATIONAL

COMMUNITY

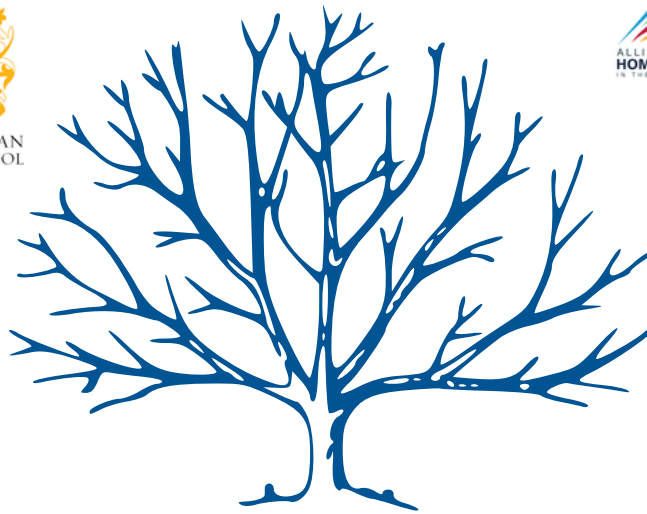


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inspire



IBM Canada
Advanced Studies



Engineers



Gwaii
ENGINEERING



Global Expertise and Experiential-Learning STEM
Education for a Diverse World



Inspire & UVIC Strategic Goals

ʔetalnəwəí | ÁTOL,NEUEL

INSPIRE embodies UVic's principle of ʔetalnəwəí | ÁTOL,NEUEL through a commitment to respectful, community-guided collaborations that uphold Indigenous rights and perspectives in lasting, tangible ways. By partnering with Indigenous communities in Tuktoyaktuk and Victoria, INSPIRE takes a holistic approach to reconciliation—***impactfully sharing resources, ensuring sustainable services, honoring cultural sovereignty, and taking responsibility for transformative engagement.***

Sharing:

From 2023 to present, Inspire has had the privilege of working with Indigenous communities, At Mangilaluk School in Tuktoyaktuk, NWT, INSPIRE has co-created Bridging Roots, an app that preserves and **promotes the Inuvialuktun language and culture** for younger generations. By researching culturally grounded teaching tools, INSPIRE facilitates ongoing language learning and strengthens local identity. In Victoria, INSPIRE hosts events where Elders, Knowledge Keepers, students, and staff exchange teachings on reconciliation and cultural revitalization, making Indigenous perspectives an integral part of the university community.

Ensuring:

Staying power is a core value of INSPIRE's work. Bridging Roots exemplifies this by involving local teachers, Elders, and youth in app updates, ensuring it remains relevant to community needs over time. For students at UVic—both Indigenous and non-Indigenous—INSPIRE offers internships and course-based projects focused on reconciliation, preparing them to support Indigenous programs and services well into the future.

Honouring:

By centering local Elders and educators, language, and community, in project development, INSPIRE respects each community's autonomy, traditions, and language rights. In Tuktoyaktuk, prioritizing Inuvialuktun preserves cultural sovereignty, while in Victoria, acknowledging Lekwungen and WSÁNEĆ territories fosters genuine relationships built on trust. Our work done with Bridging Roots is in partnership with the Indigenous Perspectives Society (IPS). **These reciprocal partnerships deepen cultural competency and help UVic integrate Indigenous knowledge across its curricula, and campus life.**

Taking Responsibility:

INSPIRE's co-creative, community-led approach models institutional accountability. Instead of a one-sided or top-down strategy, the program ensures Indigenous voices inform decision-making and guide new initiatives. Through dialogue, workshops, and sustained partnerships, INSPIRE integrates reconciliation into the university's very structure, championing ʔetalnəwəí | ÁTOL,NEUEL as a continuous and shared responsibility.

People, Place & Planet

From empowering youth to tackle climate challenges, to enabling individuals with brain injuries to find essential support, to synchronizing services for those experiencing homelessness or domestic violence, INSPIRE's initiatives exemplify UVic's commitment to **People, Place & the Planet**. By uniting inspiration, inclusion, direct action, and shared innovation, these projects demonstrate how universities can champion healthier, more resilient communities.

1. Inspiring & Activating

INSPIRE ignites purpose across students, faculty, and community partners, motivating them to address urgent local and global concerns. Through projects like Climact, youth learn to cope with climate anxiety by combining mental health support with environmental awareness. This workshop-based model engages participants directly in designing solutions to climate challenges, illustrating the power of critical thinking and collective action. INSPIRE's reach extends **beyond Victoria**, with similar initiatives in Nepal focusing on disaster response and rural healthcare, ensuring global impact.

2. Including & Supporting

Building equitable communities requires embracing diversity and ensuring services meet people's unique needs. INSPIRE's work with the Victoria Brain Injury Society (VBIS) showcases how accessible digital tools—co-created with individuals who have brain injuries—can restore autonomy and dignity. By centering those with lived experience in the design process, INSPIRE proves that true innovation emerges when everyone's voice is heard and valued.

3. Addressing

INSPIRE sheds light on system-level barriers that perpetuate societal inequities. Herluma, a project in both 2022 and 2024, for example, connects local shelters to provide comprehensive support for individuals facing homelessness and domestic violence. By streamlining data and communication, Herluma unearths gaps in resources and coordination, paving the way for policy changes aligned with UVic's principles of equity and accountability.

4. Developing & Sharing

Collaboration, continual refinement, and knowledge exchange lie at the heart of INSPIRE. Projects such as Herluma, VBIS, and Climact evolve over time to broaden their reach and efficacy. Through partnerships with community leaders, service providers, and international institutions, INSPIRE amplifies the impact of each initiative—**extending UVic's dedication to research that improves social and environmental well-being across the globe.**

Culture of Change & Transformation

By forging interdisciplinary ties across faculties and nurturing reciprocal relationships with remote Indigenous communities and global partners, INSPIRE exemplifies a **Culture of Change & Transformation**. Supporting collaboration, Fostering adaptable innovations, Creating an inclusive atmosphere, and Embracing risk-taking, INSPIRE drives meaningful shifts in both university learning and broader community problem-solving.

1. Supporting

INSPIRE unites **students and researchers from diverse faculties**—Science, Business, Social Sciences, and beyond—to co-develop real-world solutions. Course projects, co-op placements, and research opportunities ensure participants gain hands-on experience while sharing knowledge across disciplines. This interconnected approach bolsters both academic excellence and community well-being.

2. Fostering

Flexibility underpins INSPIRE's global reach and research, from language revitalization with remote Indigenous communities to international industry and university partnerships. Adaptive governance and resource use encourage creative policymaking, enabling INSPIRE to respond effectively to varied cultural and logistical contexts.

3. Creating

INSPIRE cultivates a culture of trust and inclusivity, drawing a diverse array of applicants committed to tackling complex issues. By emphasizing respect, collaboration, and mutual learning, the program welcomes a broad spectrum of perspectives and skill sets, leading to richer, more impactful outcomes.

4. Embracing

Risk-taking and experimentation are fundamental to INSPIRE's ethos. Pilot initiatives, such as Neurovation, demonstrate how innovative solutions can be tested, refined, and expanded. By viewing challenges as opportunities for growth, INSPIRE encourages a mindset that drives breakthroughs—reshaping institutional practices and fueling community-wide transformation.

Partnering for a Shared Future

By cultivating open, reciprocal relationships, Transforming internal systems to better serve partners, Responding to diverse community needs, and Advancing interdisciplinary research, INSPIRE fully embodies UVic's vision of **partnering for a shared future**. Grounded in mutual respect, these collaborations bring together the strengths of all involved to tackle today's complex social and environmental challenges.

1. Cultivating

INSPIRE engages with local and **global stakeholders and researchers**—including community organizations, Indigenous communities, industry partners, and other **academic institutions**—through co-creation. By prioritizing shared decision-making and mutual respect, INSPIRE builds authentic, sustainable relationships. Regular events and conferences further strengthen these bonds, keeping partners informed about student-led projects and inviting new collaborators into the network.

2. Transforming

INSPIRE reimagines university operations to better support **community-engaged research**. Tailored protocols—such as flexible co-op arrangements for industry partners or remote research agreements with Indigenous communities—reduce barriers and foster two-way learning. By offering part-time, full-time, and volunteer opportunities (even for high-school students), INSPIRE ensures diverse engagement. This cross-departmental coordination creates an ecosystem where reciprocal partnerships can flourish long-term.

3. Responding

At the heart of INSPIRE is active listening and adaptability, recognizing that social and environmental challenges are always evolving. **Beyond research support and student expertise**, INSPIRE connects its partners to broader networks of funding, knowledge, and resources. Whether linking nonprofits with global contacts or introducing remote Indigenous communities to parallel projects, INSPIRE ensures mutual benefit and knowledge exchange that drive meaningful solutions.

4. Advancing

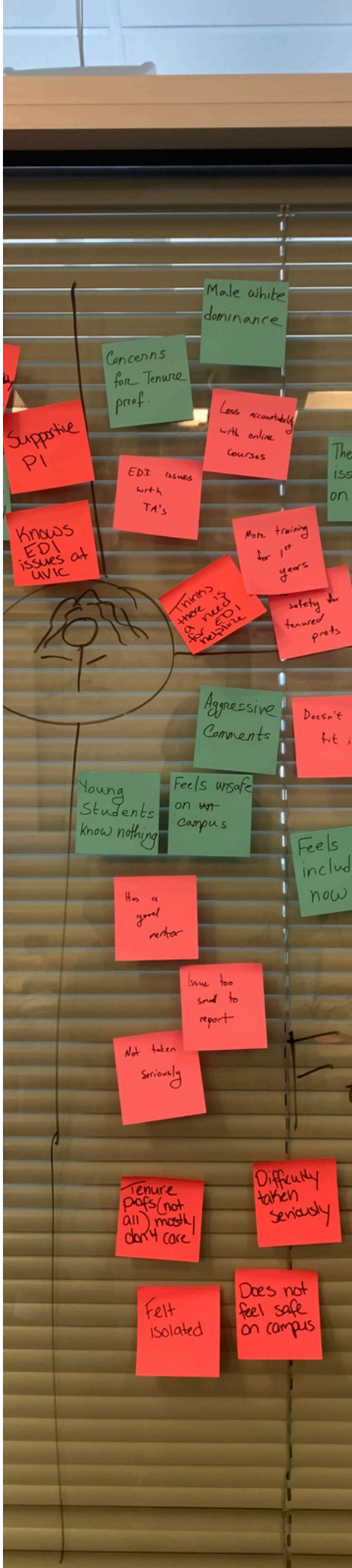
INSPIRE brings together students and faculty from a wide range of fields—engineering, business, social sciences, humanities, and more—to address complex issues through fresh, collaborative perspectives. Graduate students, in particular, contribute specialized research skills that spark dialogue and drive innovative discoveries. By merging academic disciplines to design impactful software or develop community-based programs, INSPIRE shapes creative works and service solutions that extend well beyond UVic's campus, reinforcing the university's commitment to real-world impact.

Approach to research and Innovation for Societal Impact

Our approach to the design and implementation of the program utilized a mixture of both **interactive lectures** to teach theoretical concepts, **collaborative learning** and **fieldwork** for students to put these concepts and methodologies to use. By leveraging **diversity in teams**, and the promotion of inclusivity - teams are taught about the importance of EDI from the get-go. Throughout the entirety of the program INSPIRE focuses on the idea of **human-centered design** where our community partners (stakeholders) are engaged throughout the entire process. These communications and relationships are led and **maintained by the students themselves**. This has allowed each of our stakeholders and students to **build a trusting relationship** with one another, creating a collaborative, inclusive, and co-creative workspace with one another - simulating the relationships they will have with future clients in their professional careers. As part of the program students also interact with and build relationships with INSPIRE Ambassadors (graduate/experienced upper-year students) as well as mentors (local/international industry professionals) allowing them to ask for advice from a diverse range of individuals, report on project progress, and ask for opinions on project pivots when necessary.

Core Methodologies Used

- **IBM Garage Method**
- **IBM Enterprise Design Thinking**
- **Agile Software Development**
- **SCRUM Project Management**
- **Peer-to-Peer Learning**
- **Cross-Functional Management**
- **Multi-cultural, respectful interaction in inclusive teams**



Our Advisory Board



MARCELLUS MINDEL

Marcellus Mindel is currently the CEO at Mindel Solutions and the former Head of Advanced Studies (CAS) at the IBM Canada Lab. His mission is to create transformative benefit for society through work integrated learning and applied research collaboration. Marcellus is passionate about creating inclusive communities of practice where multidisciplinary teams of students work "in the wild" to help service organizations.

MICHELLE MAHOVLICH

Michelle is Director of Engineering and Public Works with the City of Langford where she has worked for the past 14 years. Her responsibilities include overseeing road maintenance, new capital construction and new subdivision construction. Prior to working with the City of Langford Michelle worked in the private sector as Land Development Manager at the Bamberton Site in Mill Bay where she had managed the remediation of the former cement plant at this location. Michelle has worked in both geoscience and engineering fields having started her career in exploration geology, geotechnical engineering and then contaminated sites engineering.



VICTOR V. RAMRAJ

Dr. Victor V. Ramraj is Professor of Law and Chair in Asia-Pacific Legal Relations at the University of Victoria in British Columbia, Canada. Since 2017, he has served as Director of the of the Centre for Asia-Pacific Initiatives. Before returning to Canada in 2014, he spent 16 years at the National University of Singapore's Faculty of Law, and was twice seconded to the Center for Transnational Legal Studies in London. He also teaches regularly in the LLM in Business Law at Chulalongkorn University in Bangkok, Thailand. His recent research interests and publications span comparative public law, transnational regulation, and the regulatory challenges arising from the state-company relationship.



MEETA KHURANA

10 years as Associate Director, Engineering/CSC Co-op and Career Services at University of Victoria. I have previously worked at Nortel Networks and Alcatel Lucent (now known as Nokia) as a Software Designer/Developer. Have a Master's degree in Computer Science from Western University, a Bachelor in Information Systems from DePaul University, Chicago, US and a B.Sc. in Physics, Chemistry and Math from University of Lucknow, India.

MARCO PIMENTEL

Marco Pimentel is the Chief Marketing Officer at Redbrick - the parent organization to a portfolio of companies including Assembly, which he Co-Founded. Tasked with overseeing Redbrick's marketing and business objectives across all products and platforms, Marco is focused on connecting the organization's teams, nurturing creativity, and aligning the company's goals and objectives. His deep understanding of marketing, branding and partnerships was integral to the early growth of Redbrick, and its eventual place on the PROFIT 500 growth list.



RACHEL GREENSPAN

Rachel Greenspan is the Senior Director of Policy and Programs for Network BC in BC's Ministry of Citizens' Services. Her team's mandate is to connect all households in British Columbia to high-speed internet by 2027. Rachel has a strong background in technology policy and international relations. She is driven by a passion for public service, digital transformation, professional development, and tech workforce issues. Rachel's career has spanned positions in internet policy, journalism, the U.S. defence sector, and education. She was previously the General Manager for Lighthouse Labs in Eastern Canada, focusing on building a strong tech community and training the next generation of software developers. She believes strongly that career paths in technology do not need to be linear, and cares deeply about helping to grow a diverse and inclusive work force in the tech sector and beyond.

A close-up photograph of a hand with light skin and pink nail polish moving a light-colored wooden chess piece. The piece is a king or queen, with a rounded head and a tapered body. It is being lifted from a wooden chessboard. In the background, several other similar chess pieces are visible, slightly out of focus. The overall lighting is soft and warm, creating a professional and strategic atmosphere.

Meet the 2024 Exec Team & Ambassadors

INSPIRE was founded by Dr. Daniela Damian - Professor of Software Engineering and ECS-CAPI Chair in Inclusive Science, Technology and Engineering at the University of Victoria. Receiving support from the **University of Victoria's Faculty of Engineering & Computer Science, Faculty of Science, CAPI**, as well as international and local organizations working within the fields of Engineering and Science.

Dr. Damian's own research motivated her to create the program. While at the University of Victoria, she has studied the success and failure of multicultural, globally distributed software engineering teams. She believes the most innovative and successful teams are the ones that can effectively communicate and represent society's diversity.

As director of the INSPIRE Program - Dr. Daniela Damian focuses on **creating innovative, and impactful research opportunities**, business strategies and proposing implementation methods for the program, researches literature on EDI, communicates with **partnering** company executives on program advancement, prepares business plans, budgets, and provides the executive team with the resources they need.

DR. DANIELA DAMIAN

Daniela is a Professor of Software Engineering and the ECS-CAPI Chair in Inclusive Science, Technology and Engineering at the University of Victoria. She also leads SEGAL, the Software Engineering Global interAction Laboratory at UVic, where she directs research in human factors and diversity in software engineering. As an immigrant to Canada, she has experienced, reflected on and become passionate about diversity and inclusion in software development and now wants to lead changes towards more inclusive STEM fields. Recently she was the recipient of the 2020 REACH Award for Excellence in Teaching for Experiential Learning at UVic, the 2021 Google Award for Inclusion Research, and the 2019 Royal Society New Zealand Catalyst: International Leader Award.



Apprentice Garage Coordinators are graduate students and staff from the University of Victoria, working directly with the Director on managing program timeline, curriculum design and evaluation, trajectory, and overall supervision of the program including partnerships, and supporting resources.



KEZIA DEVATHASAN

Kezia leads Inspire as the program manager, and is currently pursuing a PhD in Computer Science. A dedicated educator at heart, she channels her love of teaching into every aspect of her work, delivering engaging lectures, workshops, and hands-on sessions that bring complex technical concepts to life. Kezia's mentorship style emphasizes collaboration and confidence-building, ensuring students feel supported and empowered to explore new ideas. With publications in software engineering education and collaborative software development, she applies evidence-based practices to create dynamic, inclusive learning environments. Kezia's research in team dynamics further shapes her approach, helping her design initiatives that foster effective communication and joint problem-solving.

OLENA MARUN

Olena Marun serves as INSPIRE's Communications Officer, channeling her passion for community-driven initiatives into meaningful engagement with students. She focuses on fostering collaborative networks, ensuring that the program's mission and values are effectively communicated to participants, partners, and stakeholders alike. With a knack for storytelling and outreach, Olena helps craft compelling narratives that highlight INSPIRE's impact.



BACHAN GHIMIRE

Bachan, is our program manager for NSPIRE Nepal and is currently working as a research affiliate with Dr. Daniela Damian at UVic, where he is studying software ecosystems and community engaged software development methodologies. His experience as a founder and CTO of a software company in Nepal for several years has allowed him to leverage his network with universities and I/NGOs to establish INSPIRE in Nepal. He has assembled a core facilitation team, which includes a network of industry mentors, established office spaces, and secured funding from community partners and sponsors to partially support the program in Nepal. He recently concluded the 3rd year of INSPIRE in Nepal in 2024 and is working with Dr. Damian to expand INSPIRE's efforts in Asia Pacific region. Given the apparent socio-economic barriers to the adoption of digital innovation in South & Pacific region in Asia, Bachan is committed to making contributions both scientifically and within the community through research and technical innovation for community development.

NITIN GUPTA

Nitin is an ambassador for the fundrAlse project, and an enthusiastic champion of AI for social impact, serving as an ambassador for the FundrAlse project. With prior industry experience, he merges technical expertise and empathy to address real-world challenges. Currently starting his master's degree, he focuses on ethical AI integration and responsible innovation. By collaborating with nonprofits, industry professionals, and researchers, he creates scalable solutions that support underserved communities.



IOANA VISESCU

Ioana is a PhD candidate in Computer Science at Reykjavik University, Iceland, where her work revolves around exploring both academic and practitioner applications of a novel software design process. Driven by a passion for building technology that prioritizes users and broader societal benefits, her core research areas include user-centered design, teaching software design, and examining how nudging and manipulation in software interfaces can influence user behavior ethically and responsibly.

PARKER DEBRUYNE

Parker Debruyne is an ambassador for the Herluma project, driven by a commitment to leveraging technology for social impact. Pursuing a bachelor's degree in Computer Science and Health Information Systems, he focuses on practical, data-driven solutions that address the housing crisis. Parker advocates for inclusive, affordable housing initiatives and collaborates with experts, nonprofits, and fellow students to design innovative strategies that benefit underserved communities.





Our Program Mentors

Practitioner Mentors

Thank you to our industry and academic professionals from partnering organizations who have been working diligently side-by-side with the Apprentice Garage Teams advising the students both on a team and one-on-one basis, on how to handle project pivots, manage various project phases, as well as how to refine their pitches. They came from the Victoria-based industry partners as well as joined remotely from Toronto and Kathmandu, Nepal!



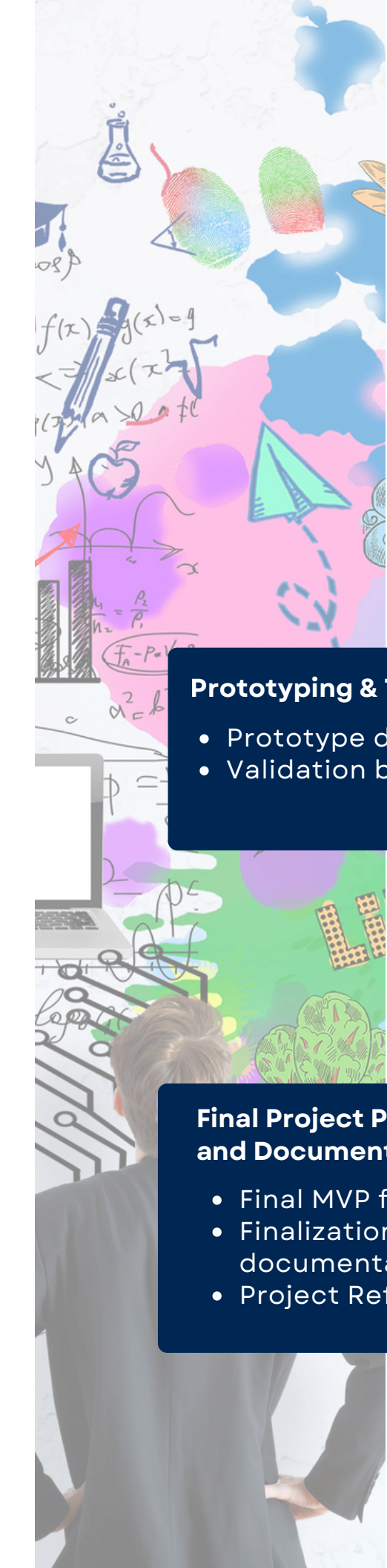
Mike Anderson
Jorge Aranda
Jason Michaelwood
Jayani Samaraweera
Riya Shrestha
Adam Hultman
Daniel Bourdage
Aarjan Ghimire



Our Apprentice Garage Projects

The 2024 Apprentice Garage Program included **22 undergraduate students between the ages of 18 to 25** with the students falling in the following areas of study: Software Engineering, Computer Science, Electrical Engineering, Science, and Biomedical Engineering, at the University of Victoria, Victoria, British Columbia. Canada and Nepal. The student's ranged in ethnicity including: Asian, Black, and White - including both **international and national residents of Canada and Nepal**. In their projects, these students engaged with five different community partners in the areas of **environmental sustainability, community health, truth and reconciliation and EDI at UVic**.





The Apprentice Garage projects evolve over 4-months and are essentially team-based opportunities for community-driven research and innovation involving undergraduate students. They work over 4 consecutive stages to fully explore society impactful problem as well as create inclusive scalable minimum-viable products for each of their community partners.

1

SEPTEMBER

Problem Identification & Validation

- Program Launch
- **Exploratory Research**

2

OCTOBER

Prototyping & Testing

- Prototype development
- Validation begins

3

NOVEMBER

Testing & Refinement

- Project Presentations
- MVP development

4

DECEMBER

Final Project Presentations and Documentation

- Final MVP fixes
- Finalization of project documentation
- Project Reflections



PROJECT 1

Neurovation

An application that will be used to help neurodiverse students, particularly those with ADHD or dyslexia, navigate and manage their learning materials with ease.

[LEARN MORE ABOUT THIS PROJECT HERE](#)



Neurovation

Individuals with ADHD often face challenges with **organization, time management,** and **sustaining focus.** Tasks can quickly accumulate or go overlooked, deadlines might sneak up unannounced, and it can be difficult to break large projects into smaller, manageable steps. These hurdles often lead to **overwhelm** and **frustration**, making **academic success more difficult** to achieve.

The proposed application is specifically designed to address these challenges by offering a streamlined **platform for neurodiverse learners**—especially those with ADHD or dyslexia—to **manage their coursework.** Its core feature is a **customizable Kanban board**, allowing users to **visualize assignments**, break them down into clear steps, and **track progress** at a glance. This structured view of tasks helps reduce the chaos that often accompanies ADHD-driven lapses in organization. The features developed in this platform were decided upon through **rigorous research methods** facilitated by the Inspire program, such as interviews, site visits, observations, surveys, pilot studies reaching into 2025, and more!

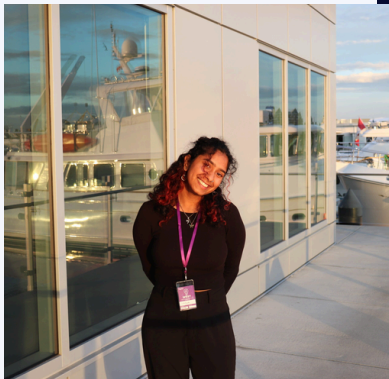
A second key component is the **Pomodoro timer**, which encourages short, focused work intervals followed by brief breaks. This technique helps learners maintain attention, mitigates burnout, and promotes a **healthy balance** between concentrated effort and rest. Recognizing that **motivation** can be fleeting, the application also provides dopamine regulation through an **in-app rewards system** to celebrate milestones and keep users engaged. By uniting these features in a single, easy-to-use platform, the app **empowers neurodiverse students** to build stronger habits, maintain mental clarity, and ultimately succeed in their academic pursuits.

Meet The Uvic Team



MANSAHAJ POPLI

Sahaj Popli is a driven Software Engineering student committed to using technology for social good. With a passion for bridging gaps and fostering equity, he focuses on creating innovative solutions that address real-world challenges. Whether collaborating on community-driven tech projects or mentoring peers, Sahaj strives to inspire positive change and empower underrepresented communities through the power of computing.



LASYA BULUSU

Lasya is a dedicated Biomedical Engineering student passionate about creating a more inclusive world for neurodiverse learners. Harnessing her technical expertise, she explores cutting-edge solutions and adaptive technologies designed to empower students with varying cognitive abilities.

"We acknowledge the difficulties we've faced, but we also recognize the progress we've made. Moving forward, we're more confident in our ability to adapt and thrive, knowing that the work we're doing has the potential to create a lasting impact."



JOSEPH BRESEE

Joe is a driven Software Engineering student committed to using his technical skills to uplift the community. Eager to make a positive impact, he actively seeks out opportunities to help the community develop effective tech solutions. By combining passion with innovation, Joe aspires to foster real-world change and inspire others to leverage technology for the greater good.



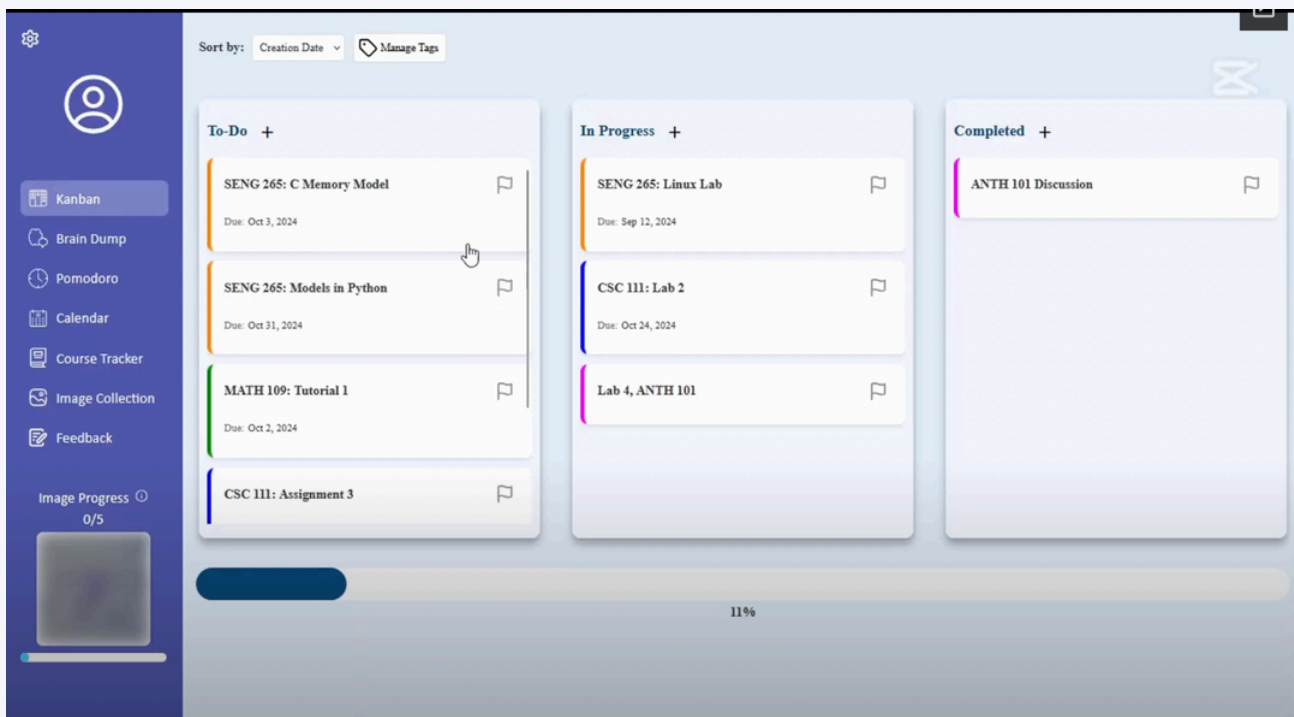
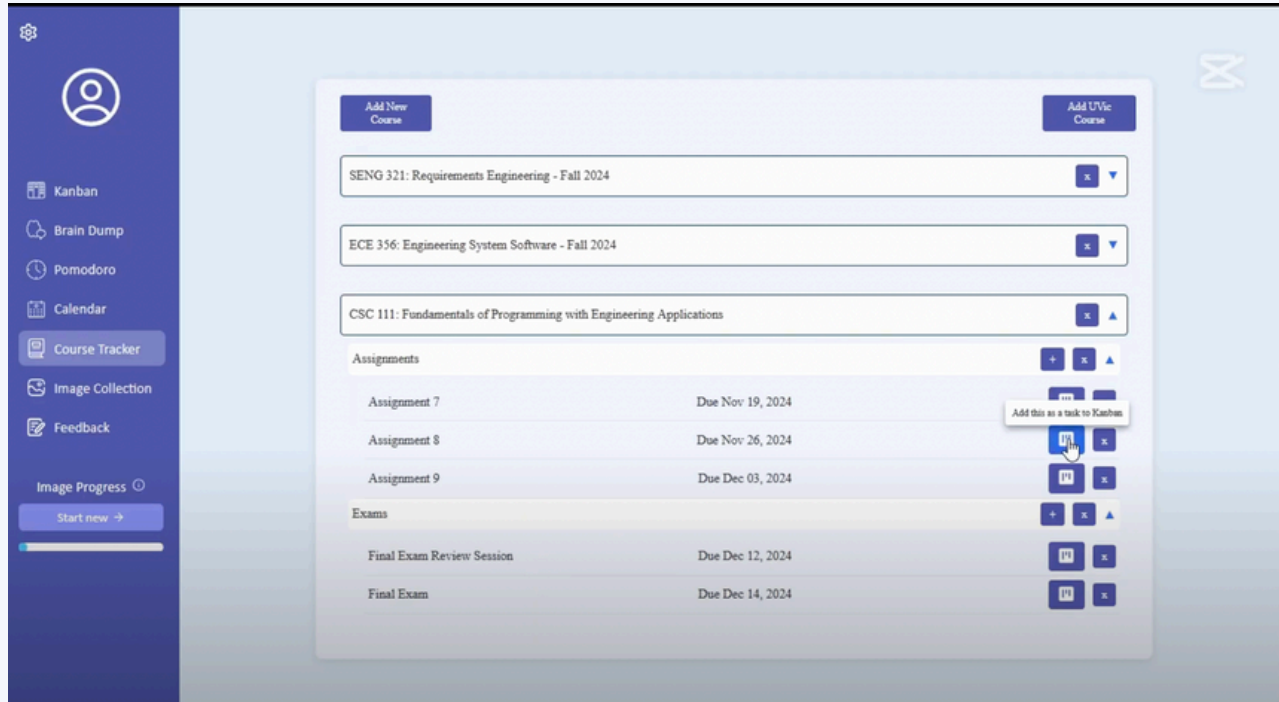
ARDA BERKTIN

Arda is an aspiring web developer driven by a commitment to social impact. By merging coding and compassion, he dedicates his efforts to building user-focused websites that make a positive difference. Through creative problem-solving and a passion for inclusivity, Arda actively seeks out opportunities to use technology as a force for good in the community.

Current Prototype

[Click Here to Explore the Platform!](#)

[See our Final Presentation!](#)





PROJECT 2

Herluma

Continuing from the 2022 Herluma project, this team endeavoured to further a solution intended to help local shelters in Victoria BC effectively find shelter for individuals experiencing homelessness.

[LEARN MORE ABOUT THIS PROJECT HERE](#)



Herluma

Herluma 2024 builds on insights gained from a 2022 pilot project that examined communication **barriers among homeless shelters** in Victoria. That earlier project uncovered two major gaps: first, emergency shelters—once at capacity—had no way to direct individuals to facilities with open beds because they lacked live data on bed availability; and second, poor coordination between emergency and transitional shelters prevented seamless movement of individuals toward longer-term housing options. By **researching key challenges** through site visits, interviews, and analyzing public data, Herluma 2024 seeks to create a unified online network for the region's shelters. Through this platform, **emergency and transitional shelters** can maintain and share up-to-the-minute data on bed availability, manage digital waitlists and logbooks, and expedite the transfer of individuals out of short-term housing and into transitional programs.

The result is a streamlined process that eases communication, reduces duplication of data entry, and ultimately boosts the odds that individuals get matched to an appropriate housing option more quickly. Herluma focuses on **real-time shelter availability**, and **updated waitlists** so that individuals can quickly access emergency shelter.

"The project has taught us a lot of things, but most of all, we've learned that understanding an issue and those at the front lines of it is paramount, and that takes work, takes time, takes empathy."

– Herluma Team

Meet The Team



MICHELLE ROSENTHAL

Michelle is a dedicated Computer Science student committed to tackling the homelessness crisis. Having witnessed its impact firsthand in her hometown, she is driven to leverage her technical skills to create meaningful solutions that support vulnerable communities. By combining compassion with innovation, Michelle aspires to develop tools and platforms that address housing insecurity and empower those in need.



DALE FOERSTER

Dale is a driven Software Engineering student focused on using technology to drive meaningful societal change. Dedicated to crafting innovative solutions, he continually seeks opportunities to collaborate with mission-driven organizations and tackle pressing community challenges. By blending technical expertise with a passion for advocacy, Dale aims to create lasting, positive impact through his work.



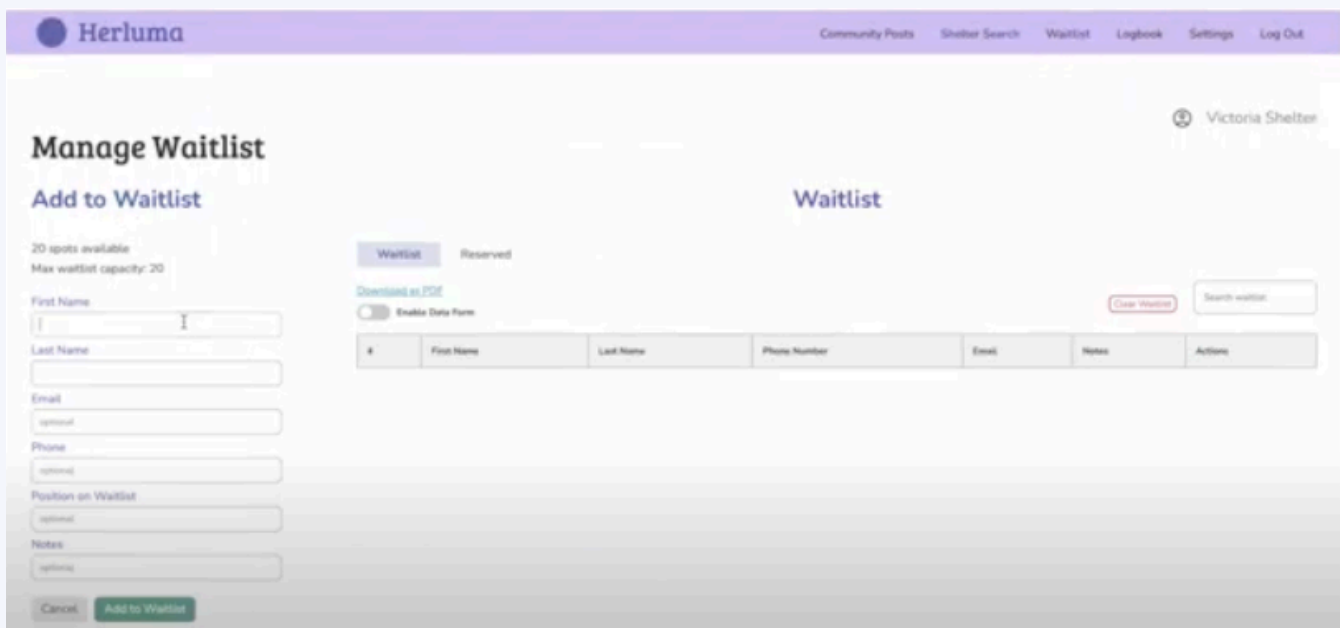
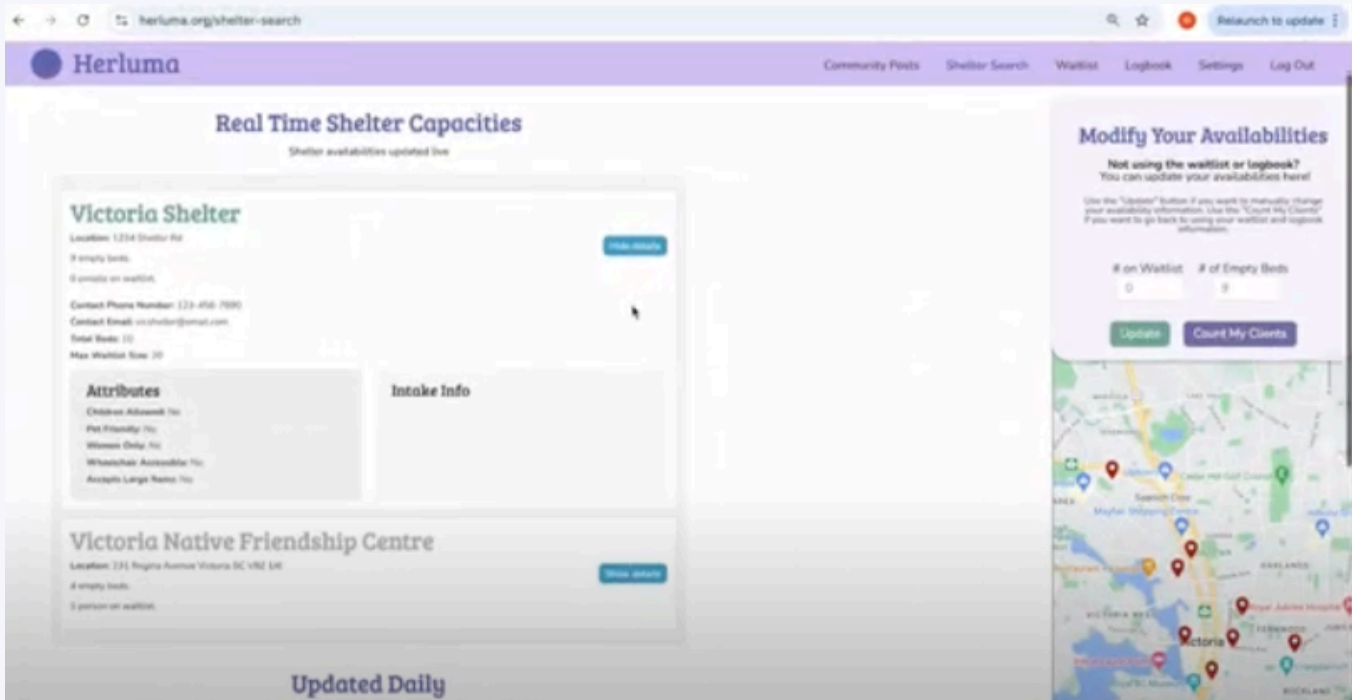
STEPHANIE ASKEWE

Stephanie is an Electrical Engineering student motivated to apply her technical expertise in meaningful ways. By combining her passion for innovation with a deep sense of community responsibility, she strives to create solutions that address real-world challenges and uplift those in need. Through empathetic problem-solving and hands-on projects, Stephanie aims to bridge the gap between technology and social impact.

Our Solution

(See Our Demo Here)

(See our Final Presentation)





PROJECT 3

fundrAise

A platform to increase donor engagement for nonprofits such that more donations are received, and staff can save time from writing campaigns manually.

[LEARN MORE ABOUT THIS PROJECT HERE](#)



fundrAlse

AI is transforming industries, but what about the organizations that need it the most—our **non-profits**? With fundrAlse, we're bringing the power of AI to these crucial pillars of our community. Imagine non-profits **creating impactful campaigns faster** than ever, sending **personalized reports** that **engage their donors**, and amplifying their message to reach more people. fundrAlse is here to supercharge their efforts, making every action more effective and every connection more meaningful. FundrAlse puts AI to work for the causes that truly matter!

MeaningfulWork, a Vancouver-based company, is dedicated to connecting nonprofits with volunteers and donors. They are developing an innovative system to help nonprofits create compelling fundraising content and expand their donor outreach. FundrAlse supports this initiative through AI-assisted text generation tools that enhance the quality, relevance, and impact of nonprofit campaigns, ultimately driving stronger engagement with potential donors.

The fundrAlse team developed **Meaningful Assistant**, an AI-powered tool designed to streamline the creation of fundraising campaigns and outreach materials for nonprofits. By **conducting research via several case studies** in nonprofits, the team is automating the writing of compelling emails, texts, and social media captions. Meaningful Assistant reduces the time to market for raising funds and **boosts donor engagement**, ultimately helping organizations expand their reach and generate **greater impact**.

“We learned how important it is to build technology that works for everyone. Nonprofits serve such a wide range of people, and that made us realize just how crucial it is to make our designs inclusive and accessible. On top of that, working in a diverse team showed us how different perspectives can make ideas stronger and solutions more impactful.”

Meet The Team



OLIVIA CHOI

Olivia is a tech-savvy innovator dedicated to using AI and cloud computing for the greater good. By combining her analytical expertise with a heart for social impact, she develops scalable solutions that address critical community needs. Through collaborative projects and forward-thinking research, Olivia strives to harness the power of technology to uplift underserved populations and create lasting, positive change.



QUINN WEBSTER

Quinn is an enthusiastic Software Engineering student who thrives on teamwork and technological innovation. Driven by a collaborative spirit, he excels at bringing people together to tackle complex challenges and create cutting-edge solutions. By fusing a passion for tech with strong communication skills, Quinn aims to cultivate an environment where individuals can learn, grow, and make a positive impact through collective problem-solving.



HAILEY GASCOIGNE

Hailey is a curious and driven Computer Engineering student who thrives on discovering emerging technologies and embracing novel experiences. Whether experimenting with cutting-edge hardware or exploring the latest software tools, she consistently seeks hands-on opportunities to expand her skill set. By fusing her technical background with an adventurous spirit, Hailey aims to push the boundaries of innovation and inspire others along the way.



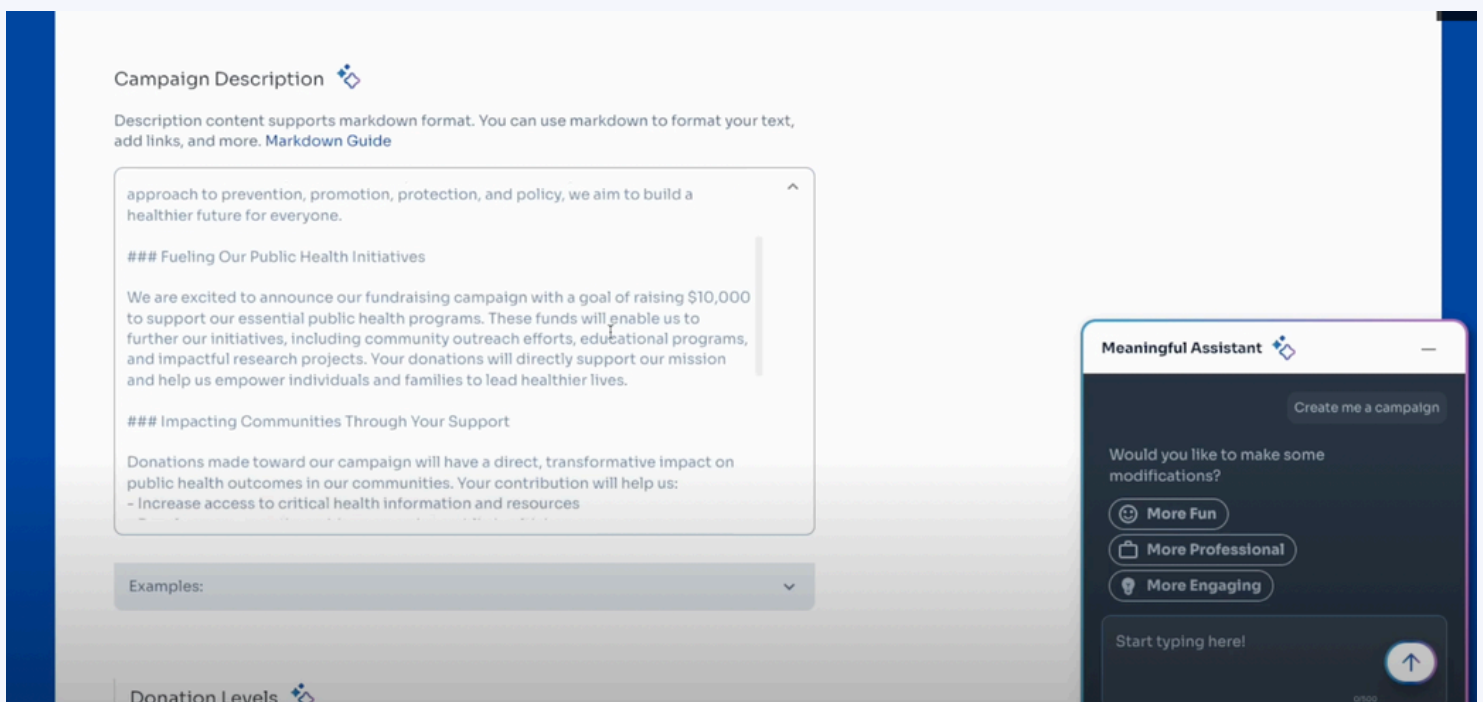
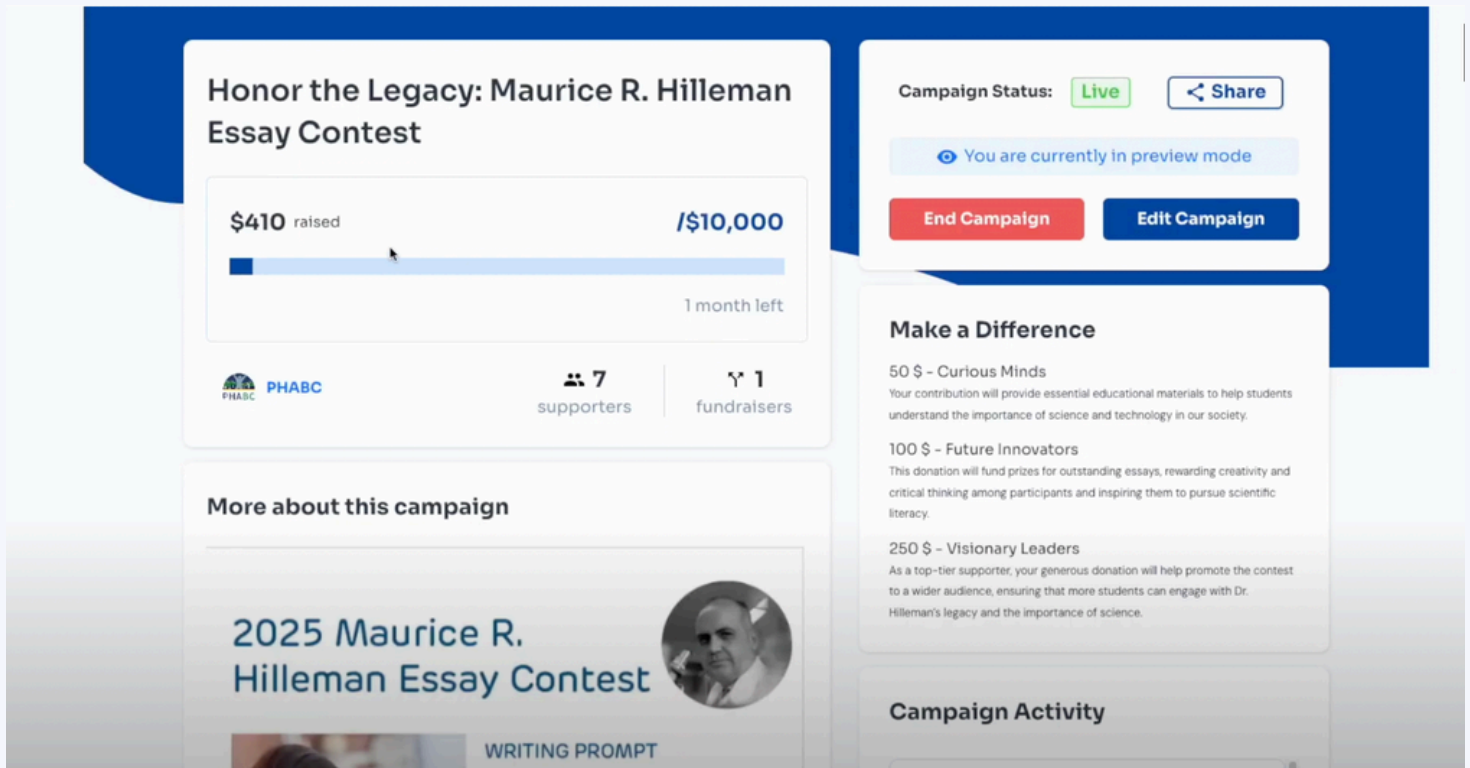
NITIN GUPTA

Nitin is an ambassador for the fundrAlse project, and an enthusiastic champion of AI for social impact, serving as an ambassador for the FundrAlse project. With prior industry experience, he merges technical expertise and empathy to address real-world challenges. Currently starting his master's degree, he focuses on ethical AI integration and responsible innovation. By collaborating with nonprofits, industry professionals, and researchers, he creates scalable solutions that support underserved communities.

Current Prototype

(See Demo Here)

(See our Final Presentation!)



PROJECT 4

Team Sahayatri

A solution to help manage patient-data in Nepal, while addressing societal concerns about data-privacy.



[LEARN MORE ABOUT THIS PROJECT HERE](#)



Team Sahayatri

Patients from rural Nepal often struggle to navigate Kathmandu's **complex healthcare system** when they travel there for specialized treatment. To address these challenges, some organizations have stepped in to guide and support them—from finding hospital appointments and suitable accommodations to securing necessary documentation. Building on these efforts, **this project focused on developing a health information dashboard** that integrates business intelligence and analytics. By consolidating data and processes into one platform, patients could:

- **Schedule Hospital Visits:** Easily find available appointments and avoid long queues or confusion about which hospital to visit.
- **Access Accommodations:** Secure a safe place to stay, particularly during longer treatment cycles, eliminating the stress of searching for housing in an unfamiliar city.
- **Manage Medical Documentation and Privacy:** Organize personal medical records and maintain strict confidentiality, reducing the chance of lost or mishandled paperwork.
- **Obtain Rehabilitation Services:** Coordinate both medical and non-medical rehabilitation support, ensuring that patients receive ongoing care beyond the hospital walls.
- **Receive Follow-Up Reminders:** Get automated notifications for check-ups or medication refills, so they never miss critical post-treatment appointments.

Ultimately, the dashboard provided a streamlined, patient-centered approach, ensuring that people from rural areas receive the same quality of care and convenience as those living in urban centers.

The excitement and enthusiasm to showcase our project, transcending borders and seas to international partners, felt unreal.

– Team Sahayatri

Meet The Team in NEPAL



SUJANA PYAKUREL

Sujana is a final year student of Bachelor in Computer Science and Information Technology (B.SC.CSIT) studying in Samriddhi College affiliated to Tribhuvan University. She works well in a team, enjoys discussing ideas with others, and loves sharing creative solutions.



SHIKSHITA SUBEDI KHATRI

Shikshita is a recent graduate of Bachelor in Computer Science and Information Technology (B.SC.CSIT) from Samriddhi College affiliated to Tribhuvan University. She is a good coder with problem-solving skills.



AMRESH SHAH

Amresh is a final year student of Bachelors of Engineering in Computer Engineering studying in Nepal Engineering College affiliated to Pokhara University. He is a great communicator with a strong interest in public speaking, video editing, and frontend design.

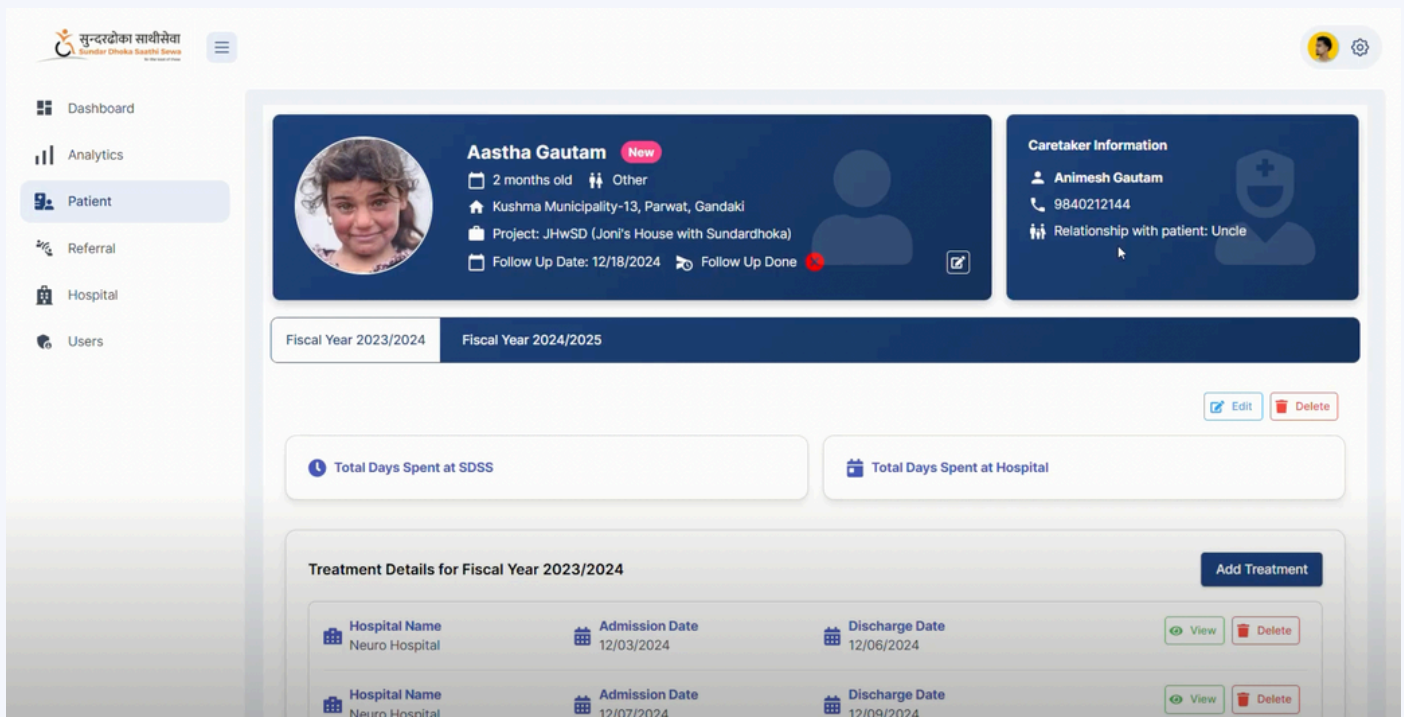
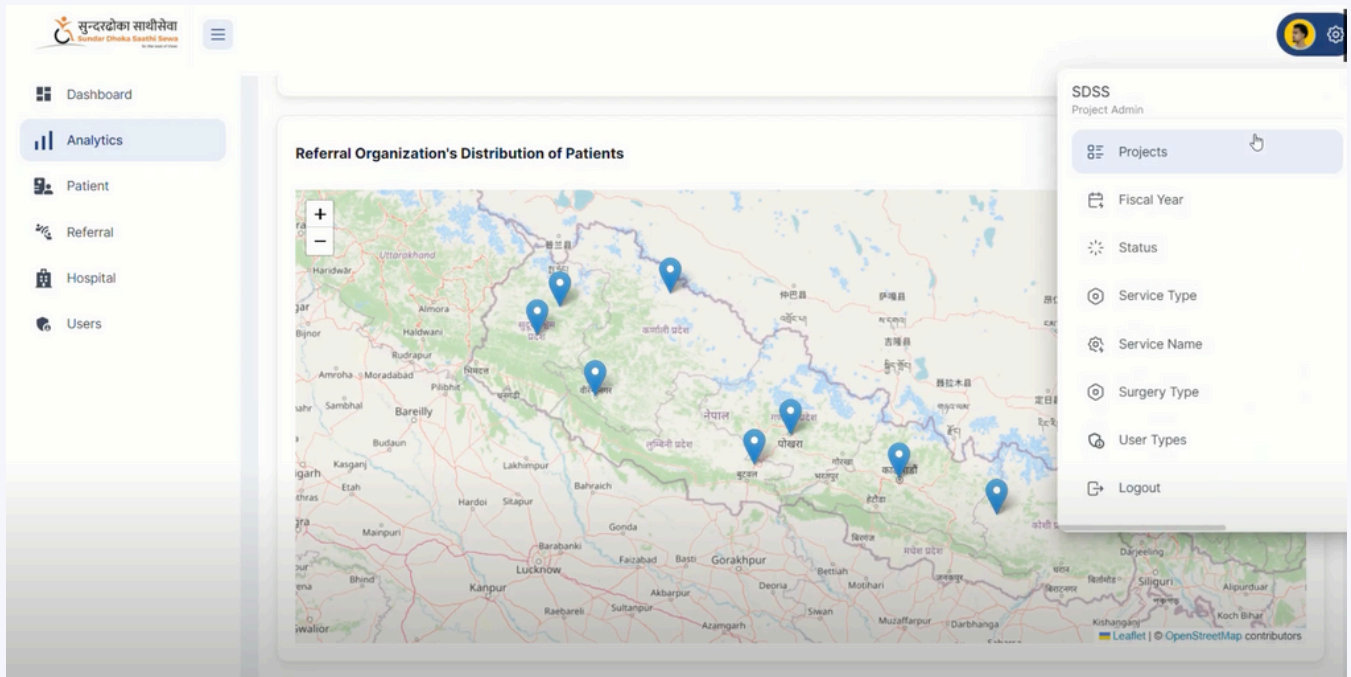


SUDARSHAN UPADHAYA

Sudarshan is a final year student of Bachelor in Computer Science and Information Technology (B.SC.CSIT) studying in Vedas College affiliated to Tribhuvan University. He is passionate about programming and has good problem solving skills.

Our Solution

See our Final Presentation!



PROJECT 5

Disaster Preparedness & Response

A dashboard to facilitate promote relief response from their community partner Nepal Christian Relief Services, and also help analyze the most vulnerable areas.



[LEARN MORE ABOUT THIS PROJECT HERE](#)



NCRS x INSPIRE Team

Nepal Christian Relief Services (NCRS) has been a key humanitarian aid organization in Nepal for over 30 years, specializing in relief, rehabilitation, disaster preparedness, and mitigation. Conducting **research with government bodies, local churches, and grassroots organizations**, NCRS serves communities nationwide, addressing immediate needs while also building long-term resilience.

In line with NCRS's mission, this project focuses on developing a **comprehensive disaster response** and preparedness dashboard designed to **enhance community resilience**. By consolidating real-time data, it helps mobilize quick response programs when disasters occur, ensuring that emergency resources and support reach affected areas without delay. A critical element of the project is the creation of a robust database that keeps detailed records of individuals and communities assisted by NCRS and partner organizations. This information is used to transition beneficiaries from initial disaster response phases toward sustained recovery. Through targeted programs—such as livelihoods support and community-based rebuilding activities—this database ensures a smooth path to long-term stability.

Additionally, the project incorporates a hazard mapping feature, enabling NCRS and collaborating agencies to identify areas most at risk based on the nature of different disasters (e.g., floods, earthquakes, or landslides). Coupled with analytics that highlight vulnerability factors, this tool helps prioritize interventions, improve planning, and strengthen overall community preparedness.

By integrating these components into a single system, NCRS aims to empower local stakeholders, streamline disaster management efforts, and foster a culture of preparedness that safeguards the well-being of Nepal's most vulnerable populations.

“This project was unlike anything we’d done before, but each of us embraced the challenge with open minds and creativity. From planning and filming to editing, every team member contributed, learning new skills along the way. Watching everyone step out of their comfort zones was inspiring, and the final product was a testament to our collective effort and growth.”

Meet The Team in NEPAL



HANOK TAMANG

Hanok is a final year student of Bsc. (Hons) Computer Science studying in Herald College affiliated to University of Wolverhampton. Along with programming, he has a talent for design and video editing, bringing creativity to his work.



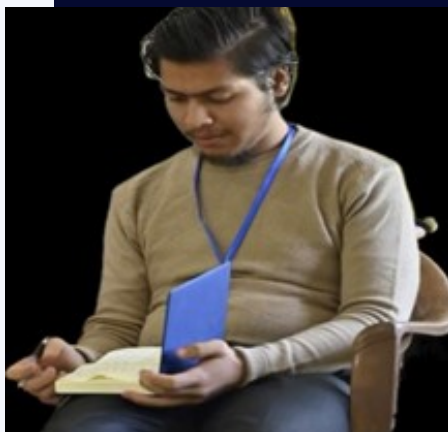
SEEMA POUDEL

Seema is a final year student of Bachelor in Computer Science and Information Technology (B.SC.CSIT) studying in Padmakanya Multiple Campus affiliated to Tribhuvan University. She is a skilled coder, a great communicator, and is passionate about data analysis.



DIKSHYA SHARMA

Dikshya is a final year student of BSc. (Hons) Computing studying in Islington College affiliated to London Metropolitan University. She is passionate about design ideas, full of energy, and has great problem-solving skills.

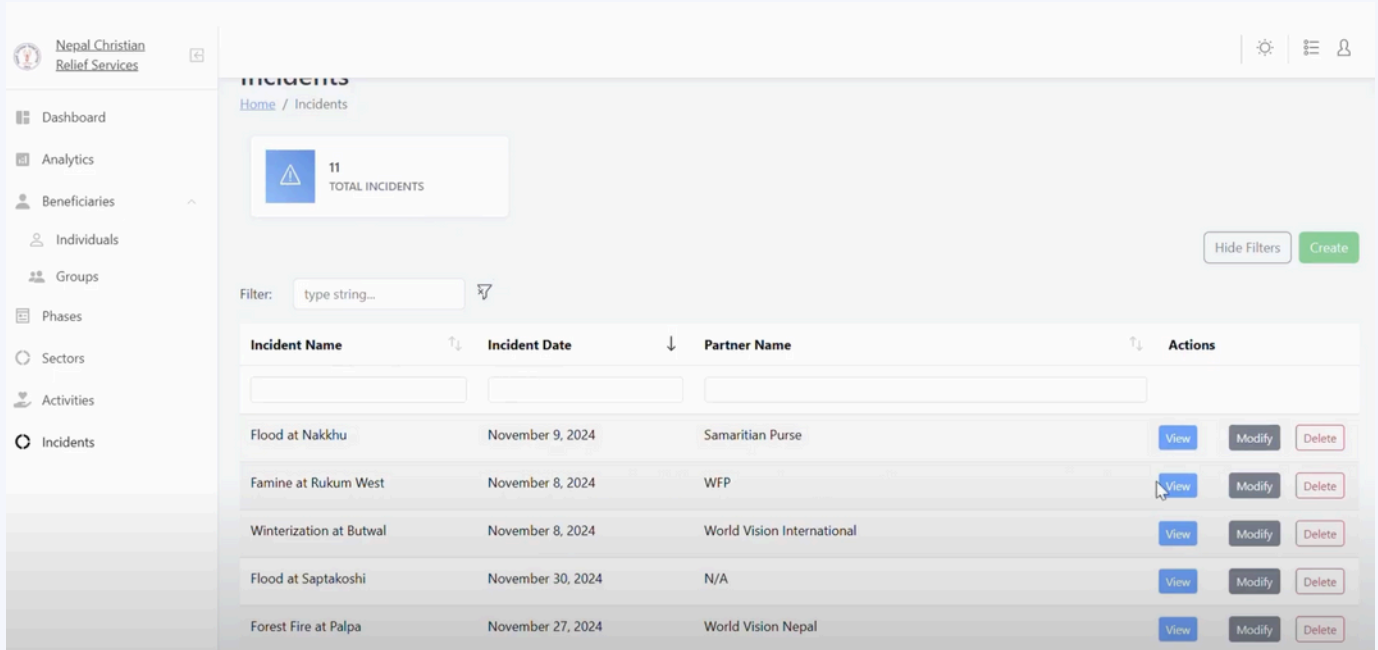


UJJWAL SHRESTHA

Ujjwal is a recent graduate of Bachelors of Engineering in Electronics Communication & Information from Thapathali Campus affiliated to Tribhuvan University. He is a quick learner with a passion for programming and enjoys tackling new challenges.

Our Solution

See Our Final Presentation!



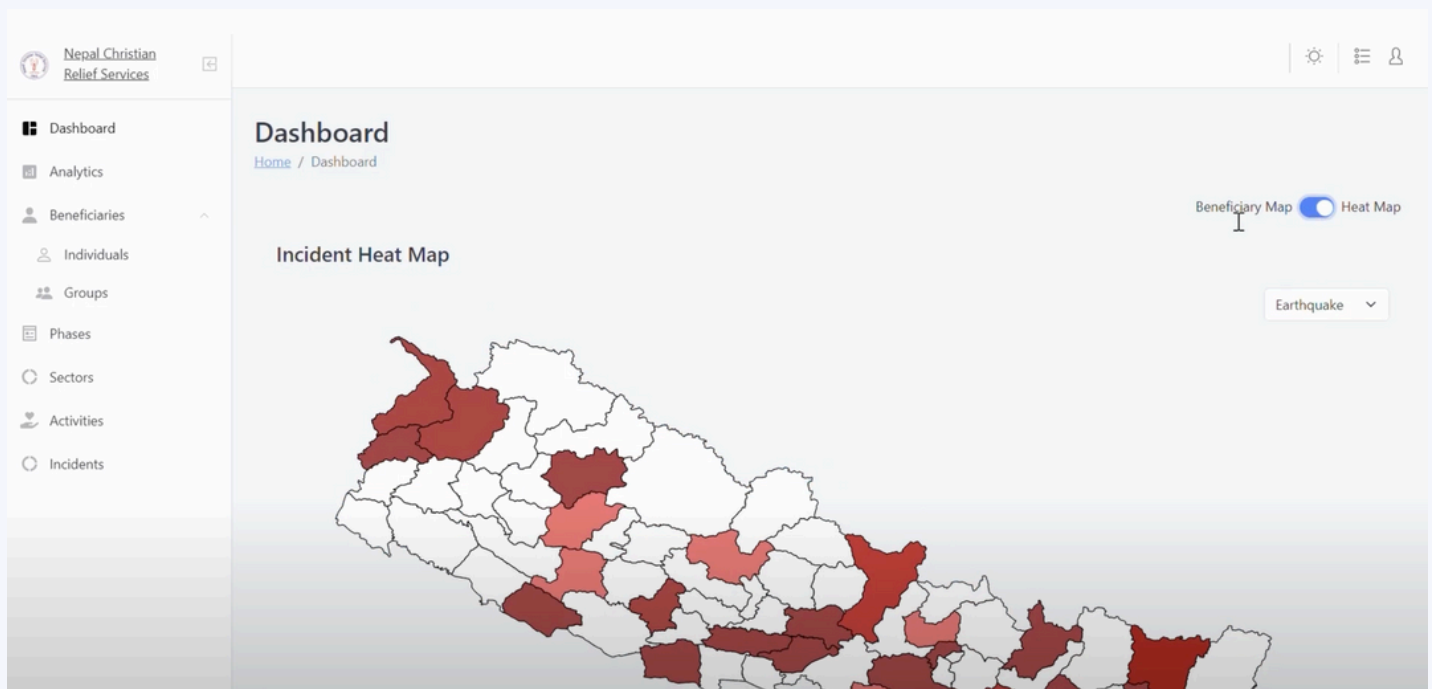
Nepal Christian Relief Services

Incidents

11 TOTAL INCIDENTS

Filter: type string...

Incident Name	Incident Date	Partner Name	Actions
Flood at Nakkhu	November 9, 2024	Samaritan Purse	View Modify Delete
Famine at Rukum West	November 8, 2024	WFP	View Modify Delete
Winterization at Butwal	November 8, 2024	World Vision International	View Modify Delete
Flood at Saptakoshi	November 30, 2024	N/A	View Modify Delete
Forest Fire at Palpa	November 27, 2024	World Vision Nepal	View Modify Delete



An aerial photograph of a vast, frozen body of water, likely a bay or fjord, under a clear blue sky. The ice is broken up by numerous small, dark patches of water and land. In the bottom left corner, a small settlement with several buildings is visible. The overall scene is desolate and cold.

PROJECT 6

Bridging Roots

A platform for youth and their teachers in Tuktoyaktuk, NWT, Canada to assist with Indigenous language revitalization.

[LEARN MORE ABOUT THIS PROJECT HERE](#)



Bridging Roots

The **Mangilaluk School** is the town's K–12 school, serving approximately 240 students—20 of whom are in high school. The curriculum uniquely blends traditional knowledge and language courses, fostering a strong connection to the local community's heritage. When the BridgingRoots team arrived, they were met with heartfelt curiosity and support from students and teachers alike.

Since September 2023, the BridgingRoots team has been working closely with four students and one teacher from the Mangilaluk School. This partnership has involved a series of design and **brainstorming sessions**, during which desired features were prototyped and validated to align with the developing **Inuvialuktun curriculum** across various grade levels. During their **trip to Tuktoyaktuk**, the team introduced the project to the wider school community, inviting teachers, students, and parents to explore its potential firsthand. The BridgingRoots team traveled to the Arctic specifically to **engage with students and educators at the Mangilaluk School**, gaining firsthand insight into their unique needs and **cultural context**. By immersing themselves in the local community, they were able to build stronger relationships and tailor the app's features to fit the school's curriculum goals. Through face-to-face discussions and collaborative **design sessions**, BridgingRoots has become a powerful tool for preserving traditional knowledge and language—now actively used by teachers and students, who appreciate its seamless integration into their daily learning.

Throughout 2024, the team continued refining BridgingRoots to ensure it integrated seamlessly into classroom instruction and engaged students with interactive learning experiences. Thanks to the ongoing collaboration with teachers, the **app's features are now fully functional** and in **active use by the school**. Students are increasingly motivated to **learn and practice Inuvialuktun**, enjoying the interactive lessons and activities, while teachers appreciate how BridgingRoots aligns with local cultural values and complements traditional teaching methods. This evolving partnership underscores the power of community-driven innovation and demonstrates how thoughtful technology design can support and revitalize important cultural knowledge.



Meet The Team



VAL SAVCHENKO

Valeriya (Val) is a final year software engineering student who is passionate about using technologies for social impact. Val feels incredibly proud to see how far the Bridging Roots project has come, and feels incredibly lucky to see the impact her work has already made.



TOM JING

Tom is a computer science student interested in new experiences and community engaged work. He feels very proud to see how his work with the team has made a positive impact on a remote community, and is very grateful for such a unique co-op experience.



JON EDWARDS

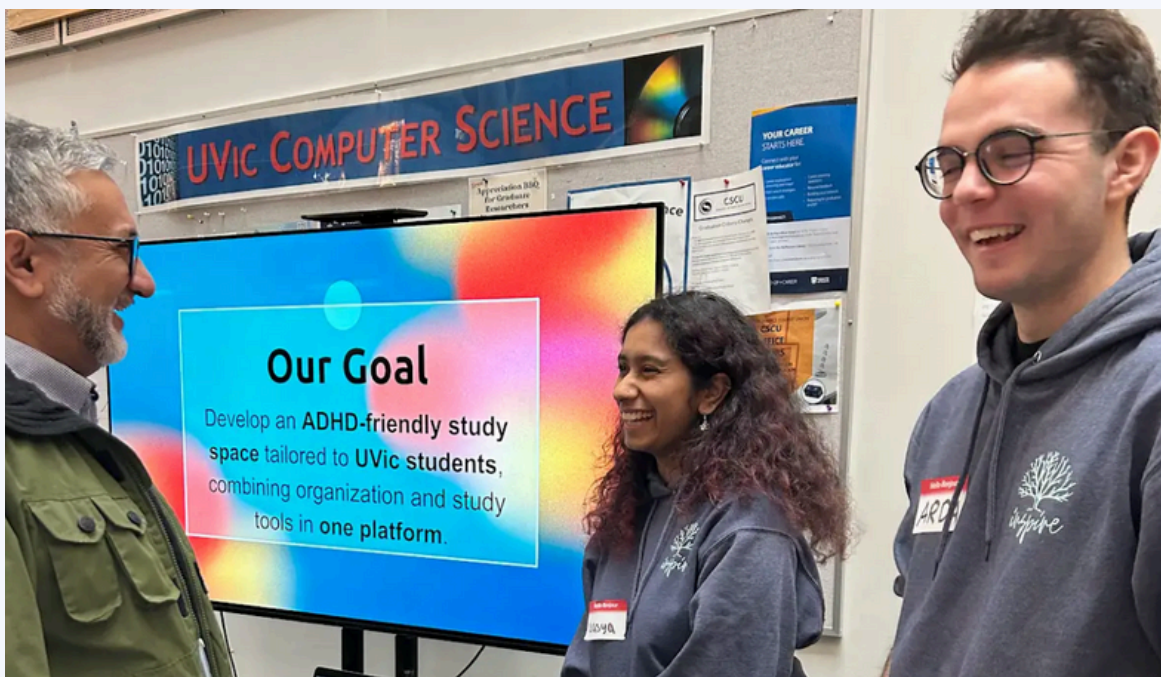
Jon is a computer science student interested in developing new skills and in community impact. He has been with Bridging Roots since its conception in 2023, and like his team, is very proud of the amount of work they have accomplished in less than 2 years.

An aerial photograph of a networking event in a modern office space. Several groups of people are gathered around tables, some of which are covered with newspapers or brochures. One person is using a laptop on a table. People are also standing and talking in small groups. The room has a blue carpet, wooden tables, and a red wall on the right side. A staircase is visible in the background.

INSPIRE Fall Networking Event

Inspire Mid-Year Conference (November 6, 2024)

The Inspire Mid-Year Conference brought together over 100 students from across UVic for a dynamic day of networking, learning, and celebration. In a vibrant project fair setting, participants showcased their latest innovations and ideas, receiving valuable feedback from peers and industry professionals. An engaging panel (delivered by Mike Anderson- Intlabs CTO, Adam Hultman-Consultant, Mike Rowling-Entrepreneur and CTO, Jason Michaelwood-Software Developer, Tara Coulter-UVIC career advisor, and Daniel Bourdage-Checkfront) on employability skills offered insight into navigating the modern job market, while the concluding "Inspire Trivia" session encouraged friendly competition and added a fun twist to the day's events. Overall, the conference highlighted UVic's collaborative spirit and commitment to fostering innovation among its student community.



The background of the entire page is a dynamic, celebratory scene of numerous gold-colored stars and confetti pieces falling from the top. The stars vary in size and orientation, creating a sense of movement. The overall color palette is warm, with shades of gold, yellow, and orange. A dark blue rectangular box is centered horizontally, containing the text 'Triple-E Award' in white. At the very bottom, a solid dark blue horizontal bar contains the text 'LEARN MORE ABOUT THIS PROJECT HERE' in white, underlined capital letters.

Triple-E Award

[LEARN MORE ABOUT THIS PROJECT HERE](#)

INSPIRE is a truly innovative cross-sectoral and national partnership at the forefront of STEM education in the Asia-Pacific region. Technologies reflect societies that build them and regard for diversity is crucial to avoiding continued disparities in the Asia-Pacific. INSPIRE educates diverse, inclusive teams for societal impact beyond what any classroom, university or country can achieve alone. A collaborative effort led by our ecosystem including the University of Victoria, other educational institutions, industry mentors and community partners in Canada, Nepal and Singapore, has brought us recognition at the Triple E awards in Kuala Lumpur, Malaysia!

This globally impactful initiative has gained recognition at the **Asia Pacific Triple - E Awards, winning 5th place in the “Impactful Collaboration of the Year” award!**

Program Director Daniela Damian, and program managers Kezia Devathasan and Bachan Ghimire are so pleased to have received this award for Inspire, and are incredibly grateful for all our sponsors which allowed us to make this happen.



INSPIRE: STEM For Social Impact

5th PLACE Impactful Collaboration of the Year Award

University of Victoria, INSPIRE Nepal, STEM for Social Impact - Nepal

"Global Expertise and Experiential-Learning: The Next Frontier in STEM Education for a Diverse World"



[LEARN MORE ABOUT THIS HERE](#)

A photograph of the Marina Bay Sands hotel in Singapore at night. The three towers are illuminated, and the Skybridge is lit up. The building's lights reflect on the water in the foreground. A fountain is visible in the lower left, and a stone wall is in the lower right. A dark blue semi-transparent rectangle is centered over the image, containing the text "Inspire x Singapore".

Inspire x Singapore

[LEARN MORE ABOUT THIS PROJECT HERE](#)

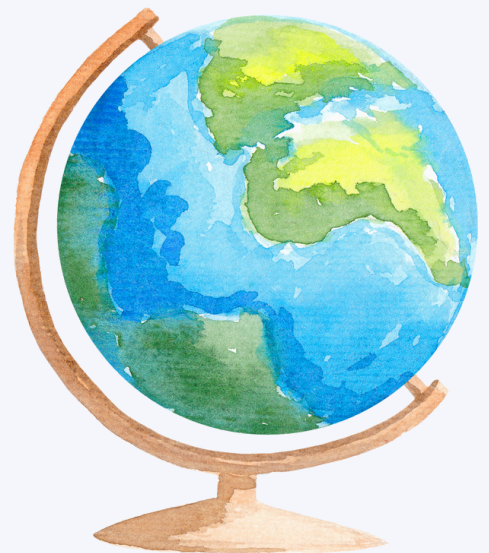


Inspire Reaches Singapore!

INSPIRE is thrilled to announce that in addition to our engaging students in Victoria, Canada, and Kathmandu, Nepal, we will be hosting **SMU (Singapore Management University)** students on exchange to participate in INSPIRE. This collaboration with SMU is a critical step into expanding INSPIRE into a truly worldwide collaboration to creating the next generation of engineers that are motivated by social impact.

We extend a special thank you to **Dr. Chris Poskitt**, director of undergraduate teaching, at SMU for his passion and sharing our vision to expand INSPIRE into Singapore. He has helped us tremendously with coordinating the program logistics between UVIC and SMU!

See you in 2025, SMU students!



[LEARN MORE ABOUT THIS HERE](#)



Youth Engagement Workshops with Claremont Secondary School

Institute for
Global Solutions
Dare to Change Your World

Our Sketch

Wednesday - Inspire Presentations
Thursday - Awareness
Friday - Holiday Extravaganza

[LEARN MORE ABOUT THIS PROJECT HERE](#)



Throughout November and December, Inspire led a series of weekly workshops aimed at helping highschool students develop **empathy-driven design** solutions to real-world social challenges. Working in small teams, students identified a social problem they cared about and applied design techniques—guided by the **Google Design Sprint Methodology**—to understand the issue, map user needs, and clarify the goals of their proposed solution. They practiced methods like “How Might We” to reframe pain points as opportunities and conducted interviews to collect feedback directly from potential users. By approaching challenges outside their immediate experiences, students gained a **deeper understanding of social issues** and learned how design thinking can spark **meaningful innovation**.

In subsequent sessions, participants defined design principles, sketched solutions with the Crazy 8 method, high speed feedback sessions to refine their ideas. They then created **low-fidelity prototypes** for apps or websites, integrating **user insights** to ensure that their creations addressed genuine needs. By December, each team presented a working concept that reflected both creativity and social awareness. This hands-on design journey not only built **practical skills** in problem-solving and prototyping, but also broadened students' **perspectives on social impact**, reinforcing the idea that thoughtfully designed solutions can **make a meaningful difference** in their communities.



LED BY

IOANA VIESCU

Ioana is a PhD candidate in Computer Science at Reykjavik University, Iceland, where her work revolves around exploring both academic and practitioner applications of a novel software design process. Driven by a passion for building technology that prioritizes users and broader societal benefits, her core research areas include user-centered design, teaching software design, and examining how nudging in software interfaces can influence user behavior ethically and responsibly.

"Through this project, the students gained a deeper understanding of how design can address complex social challenges, and how empathy can lead to impactful solutions. It was enriching to see their excitement throughout the design journey, their increasing comfort with design activities, but also their acknowledgement and appreciation for diverse perspectives." - Ioana



Third Annual Conference, Dec 17, 2024





The INSPIRE Program's Year-End Conference, held on **December 17, 2024**, marked the culmination of a year devoted to hands-on engineering experiences. Far more than a showcase, this dynamic gathering served as a convergence of ideas, ambition, and real-world problem-solving. Throughout the year, students tackled real challenges from community partners—key figures from local industries and organizations—who provided not only context but also valuable insights during industry panels. High school students from STEM programs added fresh perspectives, displaying their emerging talents and enthusiasm for innovation. Designed to bridge theory and application, foster meaningful connections, and inspire the next generation of STEM professionals, the conference illustrated the power of partnership, mentorship, and collaboration. This year's event also showcased a diverse mix of disciplines, as people from across campus and beyond came together under the umbrella of engineering innovation. Faculty and students from business, the humanities, computer science, and various other fields participated, illustrating how engineering solutions are enriched by the ideas and expertise of different academic backgrounds. The resulting collaboration not only fostered a broader perspective on how to tackle complex, real-world challenges but also highlighted the importance of interdisciplinary teamwork in driving sustainable impact.





THANK YOU

"I have thought about creating a program such as INSPIRE for many years. While this has been wonderful to dream about, I cannot put into words how exciting it is to see the vision of this program become a reality. I sincerely thank our students, ambassadors, mentors, community partners, and supporters for helping me create something amazing at the University of Victoria, and beyond."

- Dana Damian, Program Director

"We reinforced our commitment to using technology for social impact and emphasized the importance of empathy and adaptability in addressing real-world challenges. "

- INSPIRE Students

"We would like to thank our program supporters and practitioner mentors for helping us with another successful year of Inspire. I'd like to thank all of our students too. Your enthusiasm, resilience, and positive attitudes towards solving challenging societal problems through engineering never fails to be truly inspirational."

- Kezia Devathasan, Program Manager