

# **REConnect: How being a Requirements Engineer made me a better, yet humble, Software Engineer**

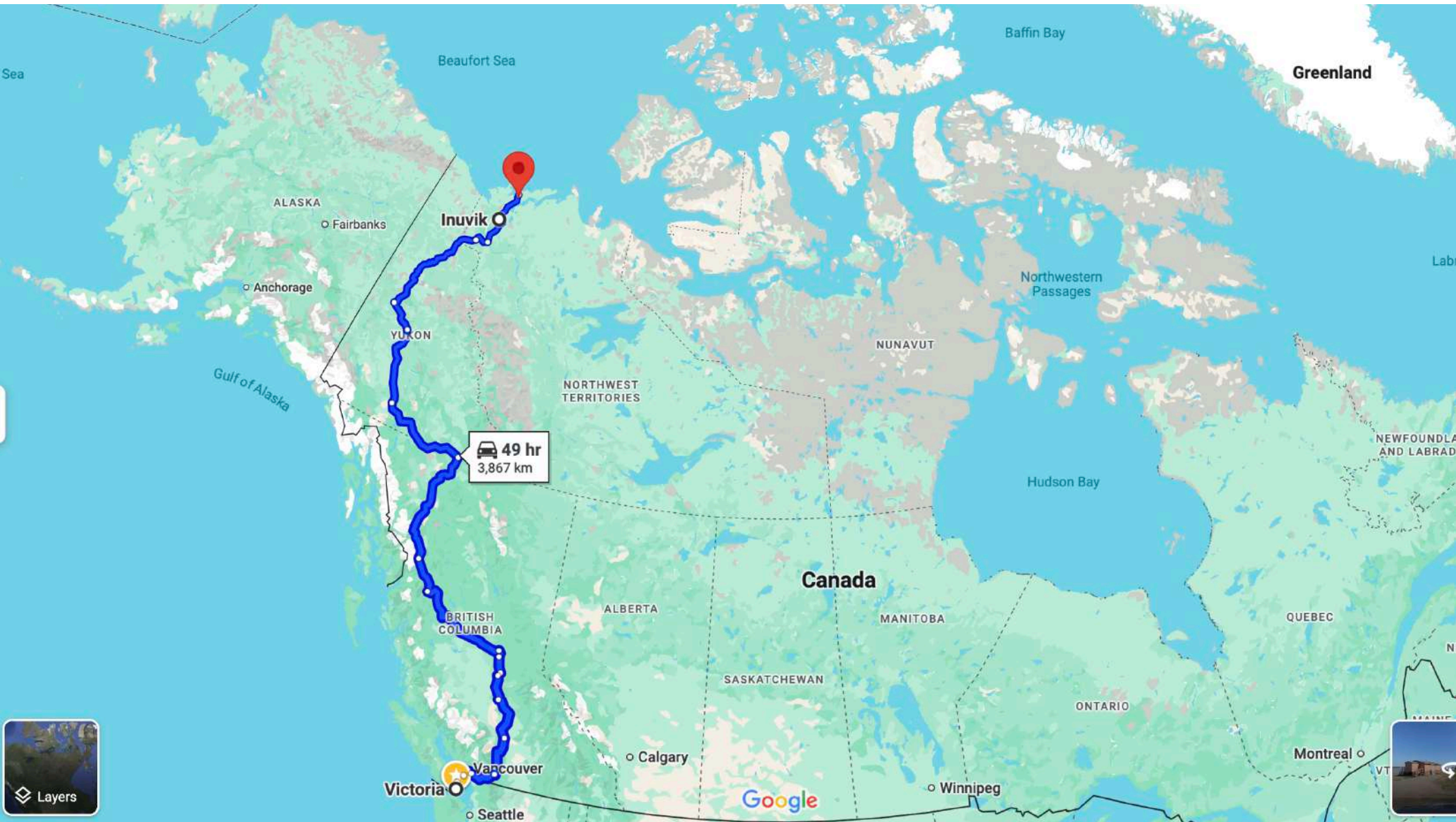
**Daniela Damian**

ECS-CAPI Chair in Inclusive Science, Technology and Engineering  
University of Victoria

IEEE International Conference on Requirements Engineering  
Sep 3, 2025

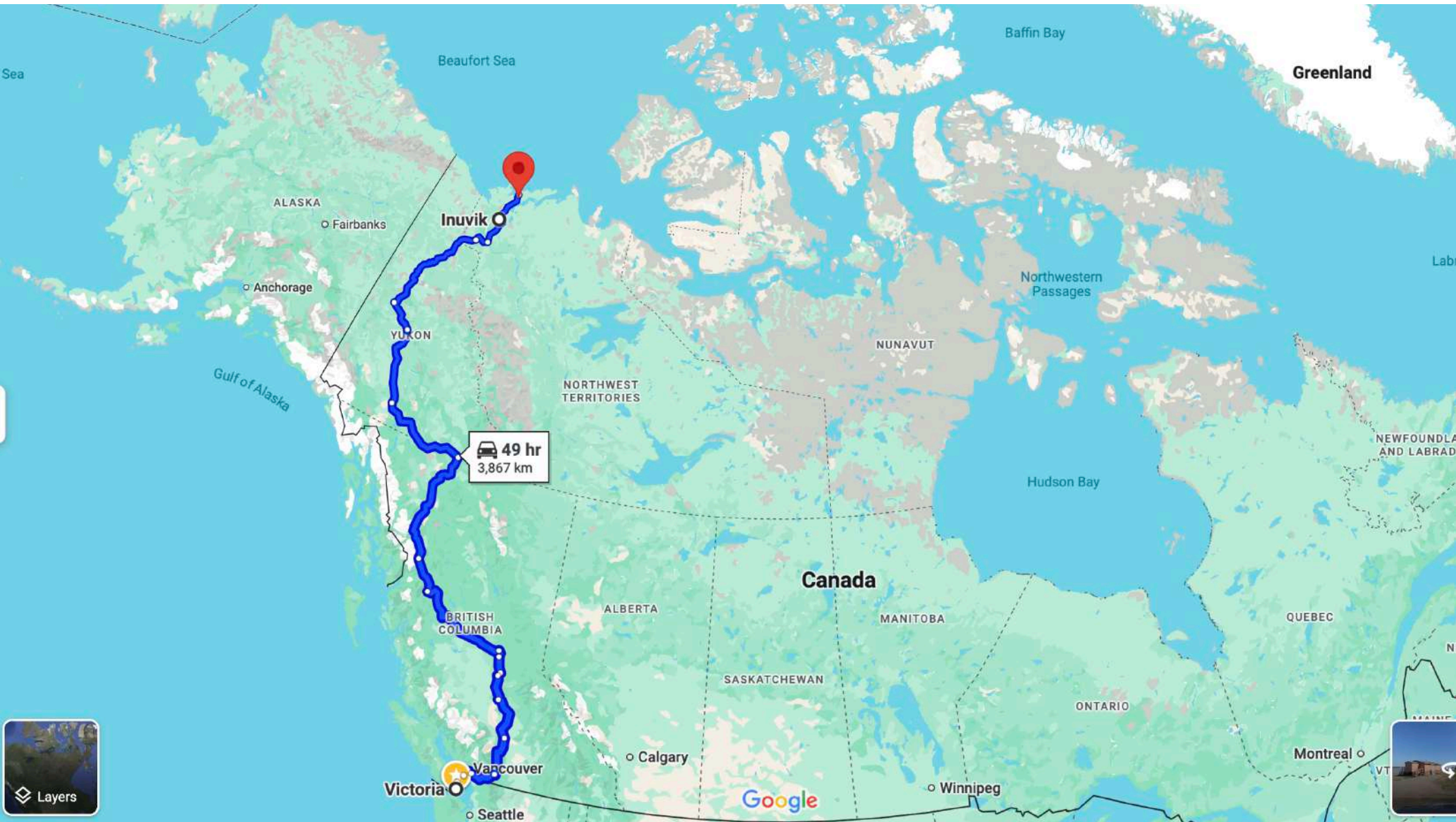




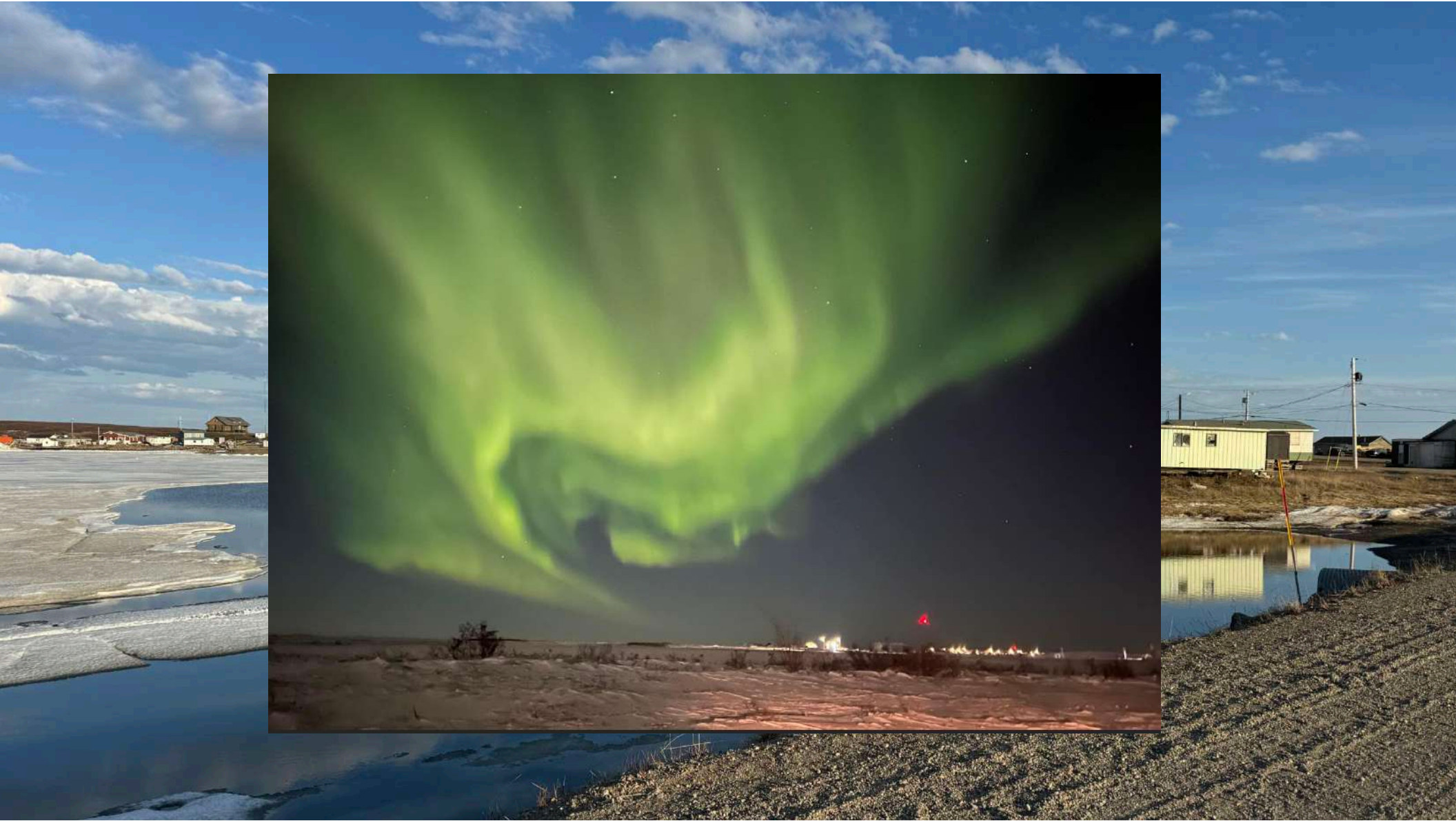


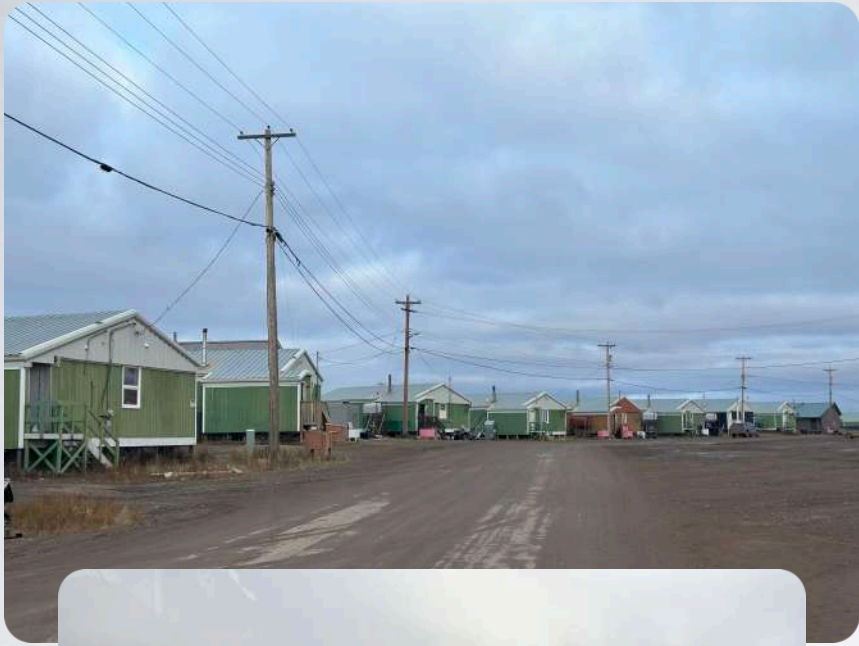


# TUKTOKAYTUK, AT THE CANADIAN ARCTIC OCEAN











**Teacher:**  
Michele Tomasino

**Students:**  
Miley Wolki  
Chase Nogasak  
Sophie Ross-Saunders  
Darryl Tedjuk



**QANUQITPIT?**

**WHAT HAVE YOU BEEN UP TO THIS  
WEEK?**

**REPLY**



**PREVIOUS**

**RESTA**

A pencil drawing on a light-colored background. Two figures stand on either side of a simple bridge. Each figure has a head with many sharp, spiky protrusions, a simple face with a slight smile, and a body with some texture. Their feet are replaced by thick, tangled roots that extend downwards and then curve back up to form the bridge between them. The drawing is done in a sketchy, expressive style. The text "Bridging Roots" is written in a large, white, bold, sans-serif font across the middle of the image, with a slight drop shadow.

# Bridging Roots

## TEAM MEMBERS



**Jon Edwards**

Computer Science



**Valeriya Savchenko**

Software Engineering



**Tom Jing**

Computer Science



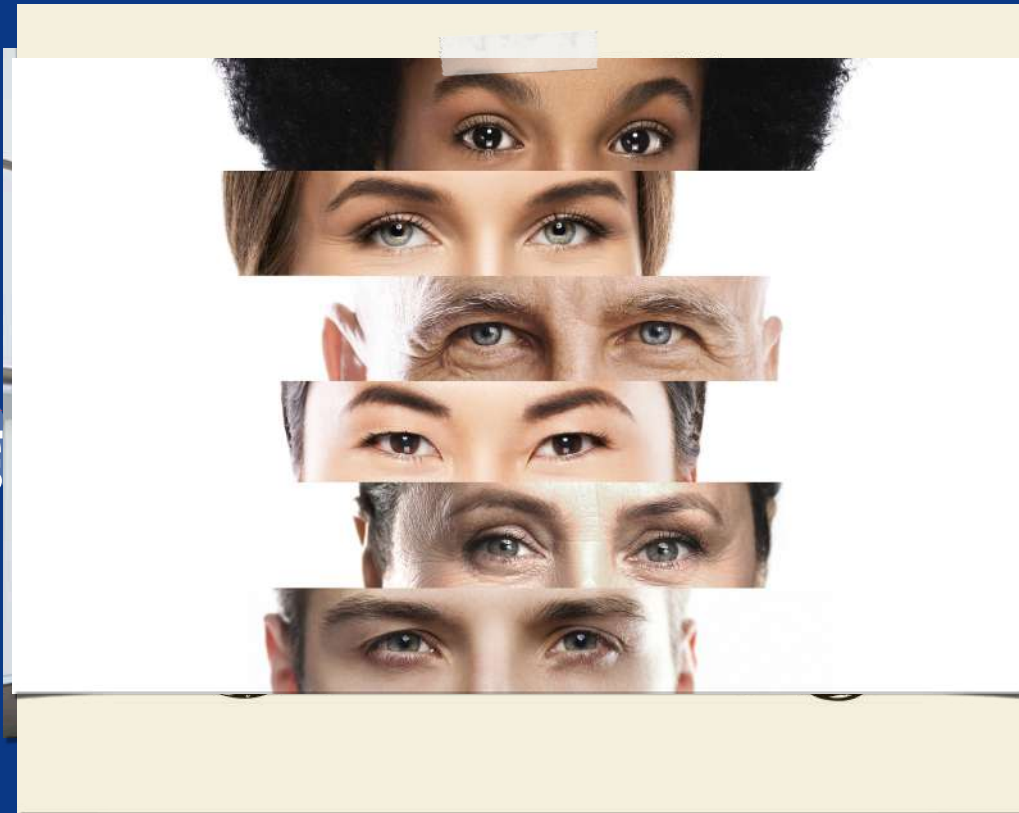
Photo by Priscilla Da Pizer on Unsplash

# Victoria TEDx

TEDxVictoria: "Empathy as Technology", May 2024



# Software Engineering: A MATTER OF PERSPECTIVES



engineering  
teams

inclusive  
software

PSYCHOLOGICAL SAFETY & EMPATHY



# STEM for Social Impact

Fostering diversity, equity, inclusion, and experiential learning in science and engineering



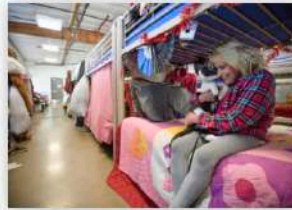
In Canada



In Nepal



# APPRENTICE GARAGE PROGRAM



## Herluma (2024)

2024, VICTORIA BC, CANADA

Connecting women to shelters and services.



## Educational Tools for Neurodiverse Learners

2024, VICTORIA BC, CANADA

Inclusive tools for neurodiverse learners.



## AI for Non-profits

2024, VICTORIA BC, CANADA

Building AI focused solutions for social impact.



## BridgingRoots in Tuk

2023, VICTORIA BC, CANADA

Indigenous language and culture revitalization for the Manglialuk School in...



## FireForce

2023, VICTORIA BC, CANADA

Software Development for Security and Wildfire Management.



## RainWise

2023, VICTORIA BC, CANADA

Sustainable Water Management in the Vancouver Island Area.



# Design Thinking

Understand

Explore

Prototype

Evaluate

4 Month Engagement (full-time internships)

Work with Community Partners

Industry advisory and mentorship

Agile Development

Training:

- technical, diversity and inclusion,
- Project Mgmt, stakeholder interaction

what I have learned along the way...

# REConnect: Participatory RE that Matters

Relationship and *trust* building

Co-designing *with* and *alongside* end users

Empowering users as *agents of change*

INNOVATION



**relationship and trust building**

INNOVATION









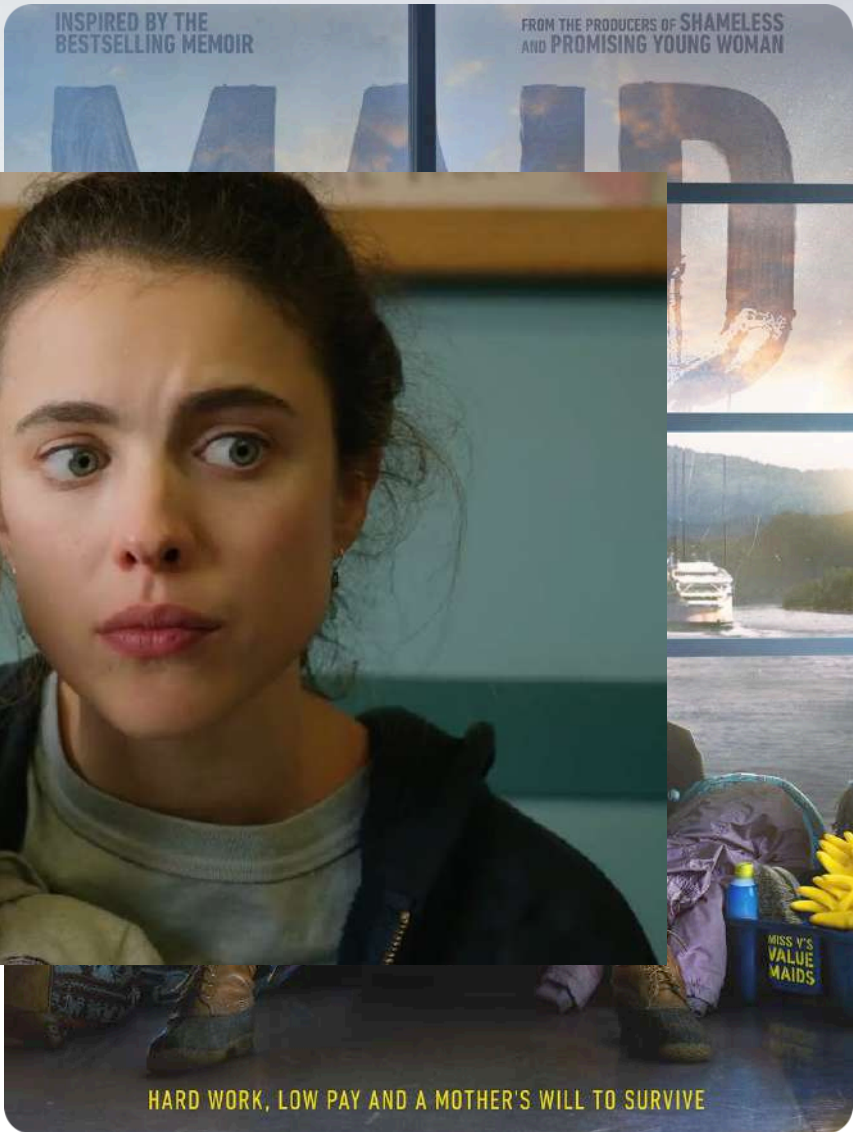
FIGHT  
FOR W



hope has found a home



TRAILER



HARD WORK, LOW PAY AND A MOTHER'S WILL TO SURVIVE



**Design Thinking Technique:**  
**Hopes and Fears exercise**

“At one point when I got kind of frustrated with my teammate I had no idea what to expect



**perspective.”**

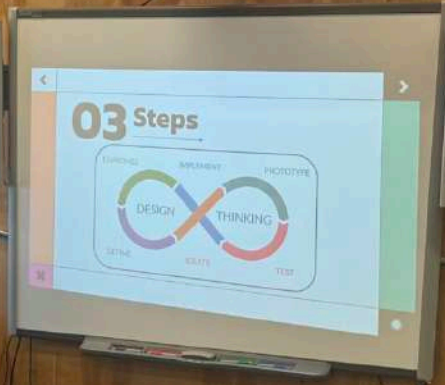
MISS V'S  
VALUE  
MAIDS

# INNOVATION

value of co-designing *with* and *alongside* end users



MangilaluK



- Motivations of Nationalism
1. Language
  2. Ethnicity
  3. Culture
  4. Religion
  5. Geography
  6. Relationship to the Land
  7. Spirituality
  8. Politics

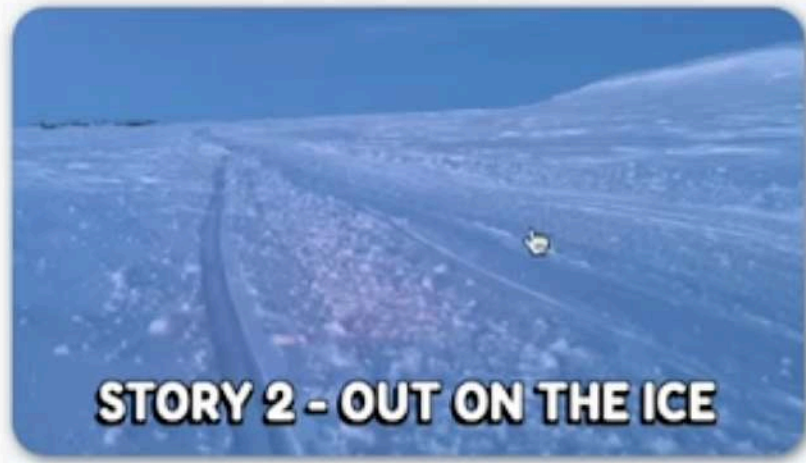


Activity

Map

Gallery

## Choose Your Own Adventure



Remember to hover over Inuvialuktun words in the stories to see their translation and click to hear



**empowering users as agents of change**

INNOVATION





# Rukum, Nepal





# REConnect: Participatory RE that Matters

## EMPOWERING USERS AS AGENTS OF CHANGE

*Leveraging motivations, and influence in context*

## CO-DESIGNING WITH AND ALONG SIDE END USERS

*Community-engaged Requirement Mapping,  
Co-Design Artifacts within socio-economic-political Context,  
Iterative Prototyping and Simulation*

## RELATIONSHIP AND TRUST BUILDING

*Contextual Stakeholder Mapping,  
Immersive Field Presence,  
Community-engaging facilitated Workshops*

# Implications: A path forward

Educating the Future Responsible Software Engineers

REConnect in the age of AI

# REConnect with GenAI human-AI collaboration that matters

EMPOWERING USERS AS AGENTS OF CHANGE

CO-DESIGNING WITH AND  
ALONG SIDE END USERS

RELATIONSHIP AND  
TRUST BUILDING

Co-reflectors in iterative review cycles

Curators and contextualisers of AI outputs

Inclusion amplifiers

Guardians of values and ethics



BECAUSE I AM AN IMMIGRANT



IT'S NOT ABOUT ME

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THIS IS US: a remarkable celebration of diversity and humanity