Jesslyn Ariya Devina

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EDUCATION

BASc in Engineering Physics, *The University of British Columbia* 09/2020 – 05/2025

TECHNICAL EXPERIENCE

Walnut, *Founder & Developer* 10/2024 – present
- Developing an AI-powered note-taking app in Swift to enhance learning for students, integrating live transcription, translation, and AI features to break down language barriers and improve accessibility
- Conducted market research and user interviews to identify key pain points, directly shaping feature development for an intuitive and user-centric experience

ICBC Road Safety Analytics, *Transportation & Data Engineer* 05/2024 – 08/2024 | Vancouver
- Developed data pipelines to process 100,000+ crash records, creating visualizations of trends by infrastructure, severity, and location to drive safety initiatives.
- Analyzed 10 years of cyclist crash data to identify high-risk locations, peak crash periods, and trends, guiding road safety improvements in BC.
- Simulated traffic flow in MATSim using custom network and synthetic population data to model dynamics in New Westminster.

Herzberg, National Research Council Canada, *Engineering Research Intern* 01/2022 – 04/2022 | Victoria
- Optimized lens specifications with data-driven design trade-off analysis, reducing costs by 20%
- Processed & visualized telescopes datasets, generating insights on mapping speed, detector count, and optical lens focal factors that directly supported CCAT-prime telescope publications.
- Redesigned telescope's 100-milli-Kelvin coaxial head, doubling connectors to resolve compatibility issues

Solar Chapter Canada, *Project Development* 01/2024 – 09/2024
- Led the design of a solar-powered pump system for Tasinifu Village, working closely with stakeholders to ensure feasibility and align with local water needs

UBC Supermileage, *Electrical Engineer* 09/2022 – 08/2023
- Designed a vehicle control board for the team's fuel cell prototype, integrating current measurement, voltage control, and safety features to optimize performance.
- Executed PCD soldering and resolved circuit issues under competition conditions at the 2023 Quebec Supermileage Competition

SKILLS

Software — ***Programming:*** *Python, Java, C/C++, MATLAB, HTML/CSS, SQL, Swift* | ***Tools/Frameworks:*** *Git, ArcGIS, NumPy, sciPy, OpenCV, Tensorflow, Power BI*, **Electrical** — *Digital logic design, Circuit Analysis & Debugging, Soldering, Oscilloscope*, **Mechanical** — *CAD Design, Prototype & fabrication, 40-hour Intensive Machine Shop Training, 3D printing*

PROJECTS

SeedBot, *Autonomous seed scanning system with Insporos* 04/2024
- Designed a semi-autonomous seed-scanning prototype for Insporos Inc., integrating XYZ gantry motion control, computer vision, and vacuum suction to accelerate the seed scanning process.

TraffiBot, *ROS-based ML Autonomous Traffic Control Robot* 04/2023
- Developed an autonomous traffic control robot using ROS and computer vision, enabling real-time perception and decision-making
- Designed, trained, and optimized a Convolutional Neural Network (CNN) for license plate recognition, achieving high accuracy through data augmentation and hyperparameter tuning.

Wall-E Bot, *Autonomous object-picking robot* 08/2022
- Built and programmed an autonomous robot equipped with a mechanical claw, PID control, and sonar sensors to locate and pick up items

PUBLICATIONS

CCAT-prime: The 850 GHz camera for Prime-Cam on FYST, 22/08/2022
Scott C. Chapman

CCAT-prime: Optical and cryogenic design of the 850 GHz module for Prime-Cam, 19/08/2022
Anthony Huber