Owen Cooke

linkedin.com/in/owenscooke | ocooke@ualberta.ca | 780-446-9694 | github.com/owencooke

EDUCATION

University of Alberta – Edmonton, AB **Sep 2020 – May 2025**
Bachelor of Science (BSc) in Computer Engineering Co-op - Software Option

- *Cumulative GPA:* 3.9 / 4.0
- *Coursework*: Data Structures and Algorithms, Object-Oriented Programming, Databases, Software Testing
- *Awards*: UofA Undergraduate (2022-23) and Jason Lang (2021-22) Scholarships, First Class Standing (2021-22)

SKILLS

Programming Languages: JavaScript, Python, C++, Java, MATLAB, QML
Tools & Frameworks: React, Node, Express, HTML, CSS, PostgreSQL, SQLite, Jest, Qt, Firebase, Git, Linux, Figma

WORK EXPERIENCE

ATB Financial – Edmonton, AB **May 2023 – Aug 2023**
Software Developer Intern

- Designed new REST APIs in Node and Express for banner deployment, lowering emergency communication time by 2 hours, which reduced customer calls to client care during service disruptions.
- Created an internal tool for managing the banners in React, adhering to specified Figma design requirements.
- Investigated improper data flow for AI fraud detection on the business banking team using agile methods.
- Collaborated with a cross-functional 6-intern team to propose a donation tracking system for a non-profit partner.

SMART LAB – Edmonton, AB **Jan 2023 – Apr 2023**
Software Engineer Research Assistant

- Converted a MATLAB program for repair path planning into Python using open-source libraries (SciPy, Open3D).
- Designed a GUI for interactive 3D visualization of the repair and connected it to the simulated robotic repair cell.
- Researched I4.0 maturity models and developed a web app for hosting the assessment via React and Firebase.
- Integrated computer vision and LIDAR sensing for obstacle distance detection using multiprocessing in Python, NumPy, and OpenCV to be incorporated onboard an autonomous aquatic vehicle.

LIMDA Laboratory – Edmonton, AB **May 2022 – Dec 2022**
Software Engineer Research Assistant

- Developed a desktop application for 3D printing quality control using Python and Qt 3D and implemented automatic alignment via the iterative closest point (ICP) algorithm for 3D scanner to CAD model comparisons.
- Authored a 6-page paper proposing an algorithm for extracting differing part-to-CAD features for automated remanufacturing that was presented at ICRAI 2023 and published on IEEE Xplore.

PROJECTS

TaskKeepr | Hack the North **Sep 2023**

- Created a Microsoft Teams bot using JavaScript and Graph APIs for summarizing team chats and listing tasks.
- Designed an interactive calendar via React for displaying chat summaries colour-coded based on Cohere's LLM classify API, facilitating easy visualization of tasks, meetings, lunches, and time off.

Proompt **Jul 2023 – Sep 2023**

- Designed a React chat interface with easy variable customization within prompts, distinct from typical AI chatbots.
- Enabled live prompt utilization and chatbot integration within the platform via Express and OpenAI's GPT-3.5 API.

OutageML | 2nd Place, APIC Energy Hackathon **Apr 2023**

- Created a power outage management web app using React and Django, specifying emergency prioritization.
- Explored AI solutions for outage prioritization (DNDF, A2C) and implemented the neural networks in PyTorch.

Save BC's Water | 3rd Place, Western Engineering Competition – Programming **Jan 2023**

- Built a versatile quiz platform using React, randomly selecting educational nature questions for young students.
- Developed a Flask API for retrieving quiz answers and storing them in SQLite to track student performance.

VOLUNTEER EXPERIENCE

TEDxWhyteAve – Edmonton, AB **Jun 2022**
Master of Ceremonies

- Wrote scripts and introduced 10 TEDx speakers and 4 event sponsors for a large audience of ~100 attendees.