Darren Lam

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PROFILE

- **3 years of experience in software development** with emphasis on Python and Java-based full-stack solutions
- Fluent in applications and techniques revolving around **cybersecurity, automation, and database management**
- **Programming Languages:** Java, Python, JavaScript, TypeScript, HTML/CSS, C, C++, ARMv8, Haskell, Prolog, Perl, Verilog
- **Tools & Technologies:** Git, GitHub, React.js, React Native, Node.js, Express.js, Flask, JavaFX, XML, SQL, SQLite, MySQL, PostgreSQL, Redis, MongoDB, Firebase, Postman, Docker, Kubernetes, WebSocket.IO, JUnit testing, Visual Studio Code, IntelliJ, PyCharm, Linux, Microsoft Azure, Microsoft Excel, Object-Oriented-Programming

EDUCATION

Bachelor's of Science, Computer Science   **September 2023 - Present**

University of Calgary, Calgary, AB

- **Concentrations:** Software Engineering, Data Science, Information Security
- Science Internship Program
- 3x recipient of the Jason Lang Scholarship
- **Relevant coursework:** Data Structures and Algorithms, Software Engineering, Computer Networks, Object-Oriented Programming, Operating Systems, Database Management Systems, AI Research

PROJECTS

CollectPal   **May 2025 - August 2025**

A React.js/SQLite/Flask stack web application to assist with gas meter-reading collection

- Developed a **BFS-style GPS mapping algorithm** using **Google Maps API and haversine mathematics** to ensure **100%** accuracy in finding the most efficient collection route
- Incorporated a **SQLite and Flask backend system** to assist with responsive updates to the CSV-based GPS route, reducing load times by **25%** and increasing work organization by **50%**
- Implemented real-time **NMEA** location fetching using a **VK-162** GPS dongle device to provide the Maps API with accurate location data
- Incorporated a seamless web page that favours user ergonomics with **React UI**, and a streamlined front-end to back-end system

Lostly   **September 2025 - December 2025**

A blog-style web application constructed using React.js/MySQL/Flask/Socket.IO for a digital lost-and-found service

- Implemented a **Flask-based backend** providing **RESTful** endpoints and **Socket.IO** real-time communication
- Integrated **Flask-login** with secure **password hashing** for user authentication and stored user credentials on a **MySQL DB**
- Designed and seeded a normalized **MySQL schema** using relational model structure with **foreign keys** and **connection-retry logic** for robust DB access
- Build secure image **upload/server pipeline** (server-side validation, secure filenames), **CORS support**, and environment-driven configuration via **python-dotenv**

TECHNICAL EXPERIENCE

Automation Engineering Intern   **May 2025 - August 2025**

ATCO, Calgary, AB

- Developed an early iteration of CollectPal in VS Code using Python, increasing collection efficiency by approximately **30%**
- Worked closely with field-workers to streamline CollectPal, resulting in the completion of **3,260** readings over four months
- Collaborated with the Itron and Temetra development teams to deploy and test CollectPal in the field

Information Technology Intern   **September 2023 - April 2024**

CovarsaDx Corp., Downey, CA

- Migrated internal workflows to Microsoft Azure, increasing collaboration efficiency by **25%** across **50+** users
- Resolved technical support requests with a **95%** first-contact resolution rate, reducing downtime by **75%** compared to last year's statistics
- Implemented cybersecurity measures, including extensive system monitoring and automated spam email disposal

EXTRACURRICULARS

Suspension R&D Engineer   **September 2024 - Present**

Formula SAE UCalgary Racing, Calgary, AB

- Designed front control arm assemblies for the **UCR-02** car using SolidWorks CAD and Adams Car Dynamic Testing Software
- Stress-tested control arm assemblies inside SolidWorks via FEA, resulting in a final iteration with an overall FOS of **2.4** under **15,600N** of load
- Ran **FEA simulations** on all carbon fiber two-force link tubes using **Ansys Mechanical** for the **UCR-03** to determine appropriate sizing based on stress and FOS results