Gavin Lusby

Computer Engineering

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Education

University of Waterloo
BASc in Computer Engineering – 3.7 GPA
Relevent Coursework: *Data Structures & Algorithms, MATLAB, FPGA Design, Assembly Language*

Skills

Languages: Python, C++, JavaScript, TypeScript, React.js, ARM Assembly, VHDL, MATLAB

Tools: Git, Firebase, Google Cloud Platform, MySQL, Rest API, Jira, Quartus

Professional Experience

Ford Motor Company
Systems / Software Engineer
- Increased speed of dashboard front-end error checker tool **800%** using multithreading
- Rebuilt **15+** KPI Report pages using JS/HTML/CSS for IVI / Digital Cockpit stability & performance benchmarking
- Built **10+** new Python process scripts to parse **2M+** datapoints into sanitized information
- Played big role in transition from JS to **React/TS/Next** to decrease development time **50%** and add documentation
- Gained experience working w/ **MySQL** to write programs that store/fetch data for in-dashboard customizability
- Automated scorecard data generation & distribution with Python resulting in a **10x** reduction in processing time

Projects

rSplit
- Leading **Firebase/GCP** app development leveraging **FaaS** to ease the process of splitting receipts/bills by item
- Uses **OCR** to detect words in images and build itemized receipt data structure which needs to be stored securely
- Uses financial ledger w/ Messaging Layer Security style **End-to-End Encryption** to store financial data for user pools

McDonalds Inventory Management System
- Worked with Git in team environment to build a mock inventory management system to simulate inventory tracking of products at McDonalds. Used encryption with salting to store employee passwords securely

McDonalds Calendar Generator
- Streamlined schedule management time **95%** by building an app that automatically converts weekly email schedules into calendar events using GCP and Google's, OAuth, Mail, and Calendar APIs.

REST API Laptop Sign Out / Return System
- Increased ease of use resulting in **60%** reduction in undocumented sign-outs by adding in-app QR code scanning

Extracurriculars

Varsity Swimming   2012 – Present
- Qualified for **Olympic Trials** in Victoria & Eastern Canadian Nationals four times
- Practice **20+** hours / week while juggling engineering classes
- Broke **ten** all-time team records in various events across multiple teams
- Competed on swim team for **eleven years** where I developed time management skills

EngSoc Representative   2023 – Present
- Liaison for **170+ students** in Electrical & Computer Engineering
- Bridging communication with EngSoc, organizing events, and driving engagement through effective leadership