Franklin Ramirez

fgramire@uwaterloo.ca | LinkedIn | Github | Personal Portfolio

Technical Skills

Languages: Python, Java, C/C++, SQL, HTML/CSS, JavaScript, TypeScript, LaTex, Bash/Shell, R

Frameworks: Git, React,js, Angular, Node.js, Express.js, Linux, Bootstrap, TensorFlow, PyTorch, NumPy, Scikit-learn, Keras, OpenCV, Bootstrap, AWS, Azure, Google Cloud, Docker

Tools: Visual Studio Code, RESTful APIs, MySQL, SQL Server Management Studio, Jupyter Notebook, Notion, Figma

Experience

Frontend Developer August 2023 - Present

Government Services Integration Cluster - Ministry of Public & Business Service Delivery *Remote*

- Leading **front-end and back-end development of Ontario websites**, utilizing Jamstack architecture with Nunjucks, Eleventy, and Alpine, to support **millions of users** per day.
- Took initiative to implement a modular component design, breaking complex functionality into reusable components thus simplifying code organization, resulting in a 40% increase in development speed.
- Driving improvements by **resolving ASP.NET & Angular UI bugs,** enhancing user experience by **30**%.

IT Assistant April 2023 - August 2023

Ontario Ministry - Ministry of Economic Development, Job Creation and Trade *Toronto, ON*

- Designed and developed an IT Billing Power App, leveraging Microsoft Dataverse and Power Automate flows, to automate billing, returns, and disposal of IT assets, **saving over 100 hours of manual effort**.
- Decreased Power Bi application loading speed by **25%** by automating the data extraction process.

Projects

Travel Trove | ***React.js, Express.js, Node.js, GPT, APIs***

- Architected a GPT-powered full-stack app for personalized dream vacation itineraries based on user descriptions.
- Optimized API integrations, resulting in a **20% increase in API speed** and a **25% reduction in API errors**.
- Developed a RESTful API using Node.js and Express to **streamline data extraction and processing**.

StatCan Data Extractor | ***Python, SQL, Docker, AWS***

- Engineered a comprehensive data extraction and transformation pipeline to manage and process large datasets, and convert to parquet **(500GB+)** for storage optimization and schema information to be stored.
- Utilized AWS services for efficient data storage and retrieval, enhancing the overall system's scalability.
- Developed an automated function for executing SQL queries on delta files, **reducing API calls by 80%**.

DermDetect | ***Vertex AI, PaLM 2, Streamlit, GCP***

- Developed a **skin disease classification tool with an 86% accuracy** trained on over 15,000 skin images.
- Created a segmentation model using degeneration points to outline skin lesions achieving a 78% accuracy.
- Built in **feature scaling and data normalization**, reducing pre-processing and model training time **by 35%.**
- Leveraged a confusion matrix to identify points where the model under-performed, and addressed this limitations by integrating additional training data improving overall accuracy by 10%.

Borealis AI Stroke Calculator | ***Python, Dash, Poetry, NumPy, TensorFlow, PyTorch, Scikit-learn***

- Created and trained a binary classification model for stroke-prediction using a random-forest classification algorithm that had a **93% accuracy, based on analysis of over 80,000 data points**.
- Performed data visualization, such as heat maps, and created a **distribution-based clustering algorithm** to identify variables with the highest **correlation to stroke**.
- Discovered a strong correlation between BMI and stroke risk, prompting for additional research on factors.

Education

University of Waterloo Present - 2026

Candidate for Bachelor of Computer Science | 3.8 GPA *Waterloo, ON*