JACOB FENG

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EDUCATION

University of Alberta

Bachelor's, Computer Science

PROFESSIONAL EXPERIENCE

Apple

Software Engineer Intern

- Built an AI RAG pipeline to scan logs for common bug causes using a set of user configured prompts against a fine tuned Foundation Model. Integrated with issue tracking to automatically run on 20GB+ logs. Improved log processing speed by 5x using highly parallelized API calls.
- Implemented a log visualization feature in a Qt C++ App used by 15+ teams. Used file chunking and helper threads to smoothly generate an interactive sequence chart for 20GB+ log files.
- Created a Slack issue tracking bot that tags stakeholders on issue creations and updates.

Teck Resources

Wireless Systems Engineer

- Generated weekly PowerBI reports for directors summarizing LTE performance by cell and UEs. Used Python and SQLite to unify vendor JSON data.
- Developed a data pipeline to ingest eNodeB data into Azure using Python + PowerShell + SFTP. Worked with Azure team to develop data specifications.
- Removed the need for \$75k of hardware by automating router stress testing using Python to simulate traffic and attenuation between a Raspberry Pi UE and the base band.
- Co-established a networks lab. Tuned RF circuit attenuation, troubleshooted RF connections using CLI tools and Wireshark, configured UEs and switches.

University of Alberta

Data Analyst Co-op

- Developed an app for plotting dense carbon capture data using Python Tkinter, Matplotlib, and NumPy featuring highly customizable plotting.
- Created Python scripts to unify 5+ years of scattered inconsistent data files (.xlsx, .csv, .txt) into Google Drive.

PROJECTS & OUTSIDE EXPERIENCE

Form Fitness: iOS Swift - Link to project

Uses the selfie camera to impose a color-changing skeleton on the user and a model image to calculate the offset between the user's form and what "good form" looks like. Currently handles static exercises such as the plank and yoga poses.

Image Caption Generator: Pytorch

Built a seq2seq computer vision model by training Google ViT and GPT-2 on the Flickr8k dataset.

Shell Simulator: C++ - *Link to project*

Built a low level process manager that emulates the Unix job architecture.

Inventory Manager: Android Studio, Java, Firebase - Link to project

Allows users to track items with detailed info such as barcodes, pictures, affiliated links. Developed in a complete Agile lifecycle from user stories to UML and Figma mockups to unit testing in JUnit and Espresso.

Kessler Fuzzy Agent: Python Scikit-fuzzy - Link to project

Optimized aiming and collision avoidance in the Kessler Game using genetic algorithms to optimize AI hyperparameters for a fuzzy system.

SKILLS

Skills: Computer Networking, Git, Python, Node.js, REST APIs, C/C++, AI, Agile, Front End, Pytorch, Operating Systems, CUDA

Cupertino, CA, USA

Calgary, AB, Canada

January 2023 - September 2023

May 2024 - September 2024

September 2020 - September 2025

September 2024 - Present

October 2023 - October 2023

October 2024 - October 2024

October 2023 - December 2023

October 2023 - December 2023

Edmonton, AB, Canada May 2022 - September 2022