Ari Abed

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EDUCATION

University of Waterloo   Sept '20 – April '25
B.CS. in Computer Science, Minor in Physics   GPA: 3.9
Awards: President's Research Award, President's Scholarship of Distinction
Courses: Data Structures, Algorithms, Operating Systems, Real-Time Programming, Numerical Computation

SKILLS

- **Languages**: Python, C/C++, SQL, JavaScript, TypeScript, Java, OCaml, LaTeX
- **Technologies:** React, NextJs, Node.js, Express, Electron, SocketIO, Flask, REST, GraphQL
- **Tools:** Git, AWS, GCP, Firebase, Ghidra, Docker, Kubernetes, Jenkins, Numpy, Pandas

EXPERIENCES

Full-Stack Engineer Intern – Credit Engineering   Campbell, CA
Aven Financial   Jan '24 - April '24

- Led the development of a mortgage brokering product with integration with third party lenders
- Created a vectorized mortgage pricing engine in Python capable of pricing thousands of applications at a time
- Constructed a brand new flow using Vuejs and TypeScript allowing users to refinance their mortgages

Software Engineer Intern – Internal Tools   Remote
Super.com (Series C Startup)   May '23 - Aug '23

- Applied concurrency to Python code and reduced Redis cache update times from 15 minutes down to 2 minutes
- Added a temporary ID for each hotel to a PostgreSQL database, allowing agents to respond to 100 more calls per day

Undergraduate Research Assistant   Waterloo, ON
University of Waterloo   Sept '22 - April '23

- Worked on a dynamic code optimization tool built in C, increasing performance on benchmarks by up to 10%
- Proposed and built a feature to analyze CPU instructions and gather cache utilization metrics using Ghidra and Java

Software Engineer Intern – Mobile   Remote
Capital One   Sept '22 - Dec '22

- Constructed a Python AWS Lambda function to automate API deployments, reducing deployment times by 60%
- Advocated for a better internal documentation system and developed a proof of concept using React and TypeScript

Software Engineer Intern – DevOps   Remote
Capital One   Jan '22 - April '22

- Owned the development of APIs using Python, capable of a data propagation time of <500ms between databases
- Developed a data consolidation dashboard made with React and JavaScript hosted on AWS S3 used by 20+ teams

Software Developer Intern   Remote
OpenText   May '21 - Aug '21

- Programmed a control-flow visualization feature using Java and JavaScript, reducing user look-up times by 50%
- Configured Docker and Kubernetes to achieve 0 downtime for a web-based internal tool used by 1,000+ employees

PROJECTS & ACTIVITIES

shrs - A shell toolkit written in Rust   ⊙

- Core developer for an open-source shell toolkit built in Rust with support for plugins and over 200 GitHub stars

TrainOS - An ARM64 Operating System

- Used C and ARM64 assembly to create a kernel capable of multi-processing and IO for use in real-time programs