

Ari Abed

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EDUCATION

University of Waterloo

Expected Apr 2025

Bachelor of Computer Science with Minor in Physics

GPA: 3.9

Awards: President's Research Award, President's Scholarship of Distinction

Coursework: Data Structures, Algorithms, Operating Systems, Differential Equations, Statistics, Probability

SKILLS

- **Languages:** Python, C/C++, JavaScript, TypeScript, Java, Kotlin, \LaTeX , Julia, C#, Rust, SQL
- **Technologies:** React, NextJs, Node.js, Express, Electron, SocketIO, Flask, REST, GraphQL, Android, LLVM
- **Tools:** Git, AWS, GCP, Firebase, Ghidra, Docker, Kubernetes, Jenkins, CMake

EXPERIENCES

Super.com

Software Engineer Intern, Internal Tools Team

May 2023 - Aug 2023

- Using Python, React, and TypeScript to build new features for a set of internal tools used by 250+ employees daily

University of Waterloo

Research Assistant, Prof. Mashtizadeh

Jan 2023 - Apr 2023

- 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

Research Assistant, Prof. Hachisuka

Sep 2022 - Dec 2022

- Optimized a fluid simulation algorithm, written in C++ and Julia, that utilized Monte Carlo integration

Capital One

Software Engineer Intern, Mobile Team

Sep 2022 - Dec 2022

- Constructed an AWS Lambda function to automate API deployments, reducing deployment times by 300%
- Managed the creation of a Python CLI tool, capable of parsing YAML configuration files with 200+ parameters
- Advocated for a better internal documentation system and developed a proof of concept using React and TypeScript

Software Engineer Intern, DevOps Team

Jan 2022 - Apr 2022

- 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

OpenText

Software Developer Intern

May 2021 - Aug 2021

- Programmed a control-flow visualization feature using JavaScript and PrimeFaces, 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

UW Blueprint - Development for Nonprofit Organizations



- Set up a database to track food donations using MongoDB with a GraphQL API configured through Python Flask

stats_cpp - A Header-Only C++ Statistics Library



- Created a C++17 library using CMake capable of calculating descriptive statistics for 100,000+ data points in <5 seconds

Songyo - Multiplayer Guess the Song Game



- Designed an online game using Node.js with Express and SocketIO, and recorded 600+ players for over 6 months