Carl Shen

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Education

University of Waterloo – Bachelor's of Software Engineering, Co-op (92% CGPA)   Sept 2019 - Apr 2024
Relevant Coursework: Algorithms, Data Structures, Operating Systems, Databases, Linear Algebra, Statistics

Experience

Opal – Software Engineering Intern (New York, NY)   May 2022 – Aug 2022
- Led and implemented a LaunchDarkly integration, enabling all engineers to use feature flags and A/B user testing
- Shipped major customer-facing full-stack features and critical security improvements using Go, TypeScript, React, GraphQL and PostgreSQL. e.g. API token expiration, admin approvals, sync user experience
- Turned around an unhappy customer (Verkada) by implementing a rate limiter for Opal's GitHub integration
- Set up Playwright testing with one other engineer. Wrote the first end-to-end tests for third-party integrations

Wish - Software Engineering Intern, Data & Relevancy (San Francisco, CA)   Sept 2021 – Dec 2021
- Implemented data automation pipelines with Airflow and Python to process and score the relevancy all search queries on Wish for **7,000,000+ products** every day via Hive SQL queries
- Developed backend microservices using Go, MongoDB, GraphQL and Redis for a new fashion ecommerce app

NCR Corporation - Software Developer (Waterloo, ON)   Jan 2021 – Apr 2021
- Developed a Dockerized Java/Maven app that automatically generates code for API endpoints using OpenAPI specifications. Served with the GCP Kubernetes Engine to **80+ engineers internally**
- Revamped the frontend interface using React, Redux, and Material UI by working with designers

TD Bank Innovation Lab - Software Developer (Kitchener, ON)   May 2020 – Aug 2020
- Developed a mobile app using Google Cloud Vision, Firebase, and Flutter, to find relevant scholarships using a photo of a student transcript

Projects

Writing Buddy   github.com/JankyCS/story-generator-nlp
- Created an AI-powered collaborative story generator, deployed as a Discord bot and a React app
- Built a **LSTM Recurrent Neural Network** using Keras for character-level text generation
- Scraped data with BeautifulSoup and preprocessed with NumPy, totalling **85,000+ training examples**

Moodly   github.com/JankyCS/mood_tracker
- Developed and released a mood-tracker Flutter app with **930+ downloads** on the Google Play Store
- Stored data locally using SQLite and encrypted/decrypted data with a Firebase Cloud Function

Sagacity - Hack the North 2019, 1st/1500+ Hackers   devpost.com/software/sagacity
- Built a MERN stack web application that converts pictures of fragmented notes into readable and organized notes using GPT

Skills

Languages Python, Go, JavaScript, TypeScript, GraphQL, SQL, C, C++, Java, Dart, HTML, CSS, Kotlin, Scala
Technologies React, Node, Express, MongoDB, Keras, Redis, Airflow, Flutter, Git, Flask, Docker, Kubernetes, OpenAPI, Jupyter Notebook, Apache Spark, Firebase