

Carl Shen

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Education

University of Waterloo – Bachelor of Software Engineering, AI Specialization (92% GPA) Sept 2019 - Apr 2024
Relevant Coursework: Algorithms, Data Structures, Operating Systems, Concurrency, AI, ML, Statistics

Experience

Roblox Corporation – Software Engineering Intern (San Mateo, CA) Jan 2023 – May 2023

- Designed, implemented, and shipped a new purchasing system for Robux transactions, processing a total of over **30,000,000 transactions every day**
- Built major client-facing GRPC service endpoints using C#, CockroachDB, Docker, Kafka, and MSSQL
- Reduced race-condition errors by over **95%** from the previous purchasing system by utilizing lease-locking
- Wrote unit tests and component tests using NUnit, achieving 90% code-path coverage

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 over **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**

TD Bank Innovation Lab - Software Developer (Kitchener, ON) May 2020 – Aug 2020

- Developed a **Flutter** app using **Google Cloud Vision** and **Firebase** to find scholarships using 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 **970+ downloads** on the Google Play Store

Sagacity - Hack the North 2019, 1st/1500+ Hackers devpost.com/software/sagacity

- Built a **MERN** application to convert photos of fragmented notes into readable and organized notes using GPT-2

Skills

Languages Python, Go, JavaScript, TypeScript, C#, 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