

Kunalan Kevin Subagaran

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Education

Queen's University

BACHELORS IN COMPUTER SCIENCE

Ontario, Canada

Sep. 2019 - Apr. 2023

- Courses: Data Structures, Computer Architecture, System-Level Programming, Logic for Computer Science, Discrete Mathematics

Work Experience

Shop Bonsai

FULL-STACK ENGINEER INTERN

Toronto

May. 2021 - Present

- Added features to React.js internal dashboard including product filters, and a user management system for administrators.
- Created external order fulfillment system that has fulfilled over \$30,000 in orders using a Node.js GraphQL API.

Shop Bonsai

SITE RELIABILITY ENGINEER INTERN

Toronto

Jan. 2021 - Apr. 2021

- Implemented infrastructure as code using Terraform, automating Google Cloud deployments and MongoDB cluster creation.
- Improved monorepo by transitioning to Yarn V2 with local caching speeding up deployment and CI/CD workflows by 18 minutes.
- Revamped Node.js image API written in TypeScript by decoupling upload/download and splitting into microservices.
- Optimized Docker build size by over 90% by implementing multistage builds and parent images.

Projects

Course Central (Course Selection App) - 2021

[View Project](#)

- Progressive Web and Android app built with Next.js and Java for students to see a course's historical GPA, enrollment data, and leave reviews.
- Used Selenium Python web scrapers to collect data, aggregated data with Deno, and uploaded data to MongoDB.
- Used by over 1600 students, with over 80,000 page views across both platforms (according to Firebase Analytics and Authentication)

Forex Trading Algorithm - 2020

[View Project](#)

- Created Python forex trading algorithm which was evaluated and trained on the Quant Connect Platform.
- Used ARIMA model from statsmodels library to place orders and sells based on correlation between forex markets and commodities.
- Preprocessed, graphed, and analyzed market data using jupyter notebooks, pandas, and Mathplotlib.
- The trading algorithm was able to make a profit of \$90,000, or 1000% from an initial investment of \$10,000.

Infinity & Beyond (Android Game) - 2019

[View Project](#)

- Android arcade game made with Unity and C#. With assets made with Adobe Photoshop and Adobe Illustrator.
- Currently sits at a 4.9 star rating on the Google Play Store.

Extracurricular Activity

Queen's Tech & Media Association

SOFTWARE DEVELOPER

Kingston

Apr. 2020 - Present

- Developed Pronto - a rental marketplace web app for students - with React.js, JavaScript, and Node.js.
- Created a CRUD system for managing user's posts, user log-in and authentication with FireBase, refund capability, a custom live messaging component, and a Stripe API to handle secure transactions between users of the application.

QMIND

AI DESIGN TEAM MEMBER

Kingston

Sep. 2019 - Apr. 2021

- Created a Python package with TensorFlow for recommender systems that uses a combination of deep, mixed, and matrix-based systems.
- Presented a Flask app using the package at CUCAI - Canada's largest undergraduate AI conference - to 100+ industry professionals.

Pickering High School

TEACHER'S ASSISTANT

Ajax

Sep. 2018 - May. 2019

- Taught Java, and concepts such as Data Structures and Object-Oriented Programming to over 25 students during my Grade 12 year.

Skills

Languages	TypeScript, JavaScript, Python, HTML, CSS, Java, Kotlin, Bash, C, C#, MATLAB, Go
Technologies	Node.js, Deno, REST APIs, GraphQL, NoSQL, Selenium, Git, Android Studio, Unity
Frameworks	Express.js, React.js, Next.js, Svelte, jQuery, Flask, TensorFlow, Bootstrap, Gin
DevOps	Docker, Kubernetes, GitHub Actions, Semaphore CI, Google Cloud Platform, CI/CD, Terraform