

Kunalan Kevin Subagaran

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Education

Queen's University

Ontario, Canada

BACHELORS IN COMPUTER SCIENCE

Sep. 2019 - Apr. 2023

- Awards: Ratehub Award in Computing, Queen's University Excellence
- Courses: Data Structures, Computer Architecture, System-Level Programming, Logic for Computing Science, Discrete Mathematics

Work Experience

Shop Bonsai

Toronto

FULL-STACK ENGINEER INTERN

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 for Customer Experience Team using TypeScript, Node.js, Apollo, and GraphQL.

Shop Bonsai

Toronto

SITE RELIABILITY ENGINEER INTERN

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 App made with Next.js for Queen's students to see a course's historical GPA and enrollment data, and read and write reviews.
- Created Selenium Python scrapers to collect data, and aggregated data with Deno. Course data was uploaded to MongoDB with a Bash script.
- Used Firebase for Authentication and Analytics.
- Used by over 700 students.

Forex Trading Algorithm - 2020

[View Project](#)

- Created Python forex trading algorithm which was evaluated and trained on the Quant Connect Platform.
- Used statistical models such as ARIMA to make predictions based on correlation between forex markets and commodities.
- 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 4.9/5 rating on the Google Play Store.

Extracurricular Activity

Queen's Tech & Media Association

Kingston

SOFTWARE DEVELOPER

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

Kingston

AI DESIGN TEAM MEMBER

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

Ajax

TEACHER'S ASSISTANT

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