

# Grayden Palfrey

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## Education

### Queen's University | Computer Engineering | Bachelor of Applied Science

Kingston, ON  
Est. Grad. 2023

- Dean's Scholar with classes including Object-Oriented Programming, Data Structures, Algorithms, Data Analytics, Computer Architecture, Networks, Operating Systems, Machine Learning and Cryptography
- Currently developing a blockchain-based package tracking system using Hyperledger Fabric, a Ktor backend server written in Kotlin, a user dashboard built in React, and an iOS NFC scanning mobile app built with Swift

## Work Experience

### Software Engineering Intern | Rival Technologies

Vancouver, BC  
May 2022 – Aug 2022

- On the backend team, developed code for Express-based microservices using JavaScript/TypeScript
- Lead integration of Facebook Messenger into Rival's market research platform by utilizing Facebook's Graph API and AWS lambdas and SQS for message routing and communication between distributed services
- Additional technologies included AWS, Docker, Twilio, GraphQL, DynamoDB and Postgres

### Software Engineering Intern | Rival Technologies

May 2021 – Aug 2021

- Wrote production code for a user management service required for the release of Rival's REST API
- Developed and automated a suite of global and regional API tests in deployment pipelines with Docker
- Automated API documentation generation and deployment to AWS S3 buckets in Bitbucket pipelines

## Extra-Curriculars

### Senior Software Developer | Queen's Technology and Media Association

May 2021 – Present

- Currently managing a four-person full-stack development team working to bring a software product to market
- Placed 1<sup>st</sup> in 3 of my 3 QTMA biannual pitch competitions, with products including a roommate-searching application and a gift recommendation application

### Project Manager | Queen's University Algorithmic Network and Trading Team

Sep 2020 – Present

- Currently overseeing 3 teams of general members pitching and developing trading algorithm strategies
- Placed 1<sup>st</sup> in QUANTT's algorithmic trading competition by developing and implementing an ARIMA time-series forecasting and NLP sentiment analysis strategy in Python

### Control Systems Engineer | Queen's Hyperloop Design Team

Oct 2021 – Present

- Currently developing a web-based GUI for real-time data communication and visualization, for data including voltage, speed, and temperature, sent over UDP from the Hyperloop pod built with Express and React

## Projects

### Sift

Sept 2022 – Present

- Developed a gift recommendation app featuring individual product swiping and gift recipient profile creation
- Built frontend React Native app with Flask and MongoDB server deployed to AWS EC2 with Nginx and Unicorn
- Used Scikit learn to build profile based and collaborative filtering recommendation algorithm from swipe history

### Casa

Sept 2021 – May 2022

- A smart mobile roommate searching application featuring custom profile creation, a personalized profile ranking feed, and in-app communication previously released to the App Store
- Developed in Expo with JavaScript and React Native using Firebase user authentication and NoSQL database

### QU Bird Hunter

June 2021 – Aug 2021

- Rebuilt a course selection tool for Queen's students displaying approximately 2000 past grade distributions accessed by 50k+ viewers annually
- Personally automated grade distribution submission process and reduced biannual data entry time from around 20 hours to 15 minutes with NumPy and Pandas in Python

## Skills

**Languages:** JavaScript, TypeScript, Python, C, Java, MATLAB, Arduino, Assembly, SQL, Bash, Verilog

**Technologies and Frameworks:** Node, React, React Native, Express, REST, GraphQL, Git, AWS, Docker, Bitbucket, Nginx, Flask, Pygame, Selenium, TensorFlow, OpenCV, SFML, Qt, MongoDB, Flask