Ryun Kim

3B Mechatronics Engineering | University of Waterloo

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Languages: JavaScript/TypeScript, SQL, MATLAB, C/C++
Tools: React, Node.js, Express, Postgres, MongoDB, DBeaver, Postman, Expo, Terraform, AWS, Azure, Google Cloud, Git, Jira

WORK EXPERIENCE

Full Stack Engineer Intern | Carrot Inc. – Pivot   Sep 2021 – Present
- Developed Carrot's main product Pivot which is a program that combines software, breath sensors, human coaching, and behavioral science to help people quit smoking
- Designed and implemented streamlined UX flow for re-enrollment in the program which automatically ships replacement sensors; developed scripts, services, DAOs, and endpoints in **TypeScript**, **Postgres**, and **Express**
- Automated process for updating tracking sheets by defining Amazon **ECS** task definitions and **CloudWatch** cron jobs via **Terraform** and a **Google Cloud** service account, reducing overhead for this process by 93.3%
- Remodelled backfilling scripts in internal ETL framework to follow separation of concerns and address scalability issues, greatly increasing throughput

Full Stack Web and Mobile Developer | Audioworks Technologies   Jan – Jun 2021
- Developed a cross-platform music app hosted on Microsoft **Azure** from the ground up focusing on social features including instant messaging, comment threads, and push notifications in an agile start-up using **MERN** stack
- Developed REST APIs for various resources and implemented Redis caching to improve efficiency by 82.9%
- Designed and implemented robust Reddit-style comment threads and **Expo** push notifications throughout the app to increase user engagement and retention
- Transformed Figma designs into responsive UI for the mobile app and staging site deployed to an NGINX server

Software Developer | Mensante Corporation – FeelingBetterNow   Mar – Apr 2021
- Developed full stack features in **React** and **Express** for an online mental health assessment and treatment service which strives to destigmatize mental illness and to increase accessibility to such services
- Implemented deep linking using Firebase Dynamic Links and **Expo** push notifications to increase the number of mobile app downloads, user engagement, and relevant content delivery
- Integrated Chart.js to provide a graphical widget for users showing scores from past assessments, and i18next to add support for multiple languages and reach a broader audience

Full Stack Developer | SS&C Technologies   May – Aug 2020
- Addressed the need for continuous inspection of code quality by researching and integrating SonarQube into the build of a brokerage management software resulting in a 70.4% reduction of code smells, defects, and vulnerabilities

PROJECTS

Masked Captions | Hack the North 2020++   Jan 2021
- Prototyped a mobile app with real-time speech-to-text display and translation capabilities on a 3-D printed phone mount for communicating in-person more easily and safely during the COVID-19 pandemic using **Google Cloud** APIs and Unity

Anti-Bumper Car | Hack the 6ix (2nd place winner out of 400+ hackers)   Aug 2020
- Developed an iOS app in Swift on Xcode to detect environment and actors around a self-driving prototype and send appropriate driving commands to avoid collision using ARKit and Autocode

EDUCATION

Candidate for Bachelor of Applied Science
Mechatronics Engineering, University of Waterloo, 2023
- **Relevant coursework**: Computer Structures & Real-Time Systems (MTE 241), Data Structures & Algorithms (MTE 140)
- Dean's honours list; excellent academic standing