Marcus Chok

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SKILLS

Languages: TypeScript, JavaScript (ES6+), C#, Java, C, Python, HTML, CSS
Frameworks and Libraries: React, Redux, Next.js, Angular, Express, Node.js, ASP.NET Core, Spring Boot
Tools and Technologies: Git, MongoDB, MySQL, PostgreSQL, Heroku

PROJECTS

Listen and Go 🔗   Apr 2021 – May 2021
- Architected an accessible audio player using **Angular Material** to play remote YouTube playlists and songs
- Migrated existing REST API to **GraphQL**, optimizing data throughput and **decreasing loading times by 15%**
- Designed a normalized **PostgreSQL** database using **Entity Framework Core** to eliminate data repetition
- Automated HTTP requests to the YouTube API and used .NET Core Identity to prevent unauthorized calls

Unified Chat 🔗   Mar 2021 – Apr 2021
- Created a real-time chat using WebSocket, modelling message data using **Spring Data JPA** and Hibernate
- Divided features into separate Angular modules to improve maintainability and **increase performance by 5%**
- Improved security by employing Auth0 and **Spring Security** to authenticate users and validate access tokens

Expense on Rails 🔗   Feb 2021 – Mar 2021
- Developed a sortable user interface with **Next.js** and **Material-UI** to visualize user expenses and transactions
- Refactored state management logic with **Redux** to reduce the number of expensive database queries by **50%**
- Built a RESTful API with **Express** to allow users to input, update, and delete data from a **MongoDB** database
- Implemented authorization using Passport, encrypting data with JSON Web Tokens to ensure secure transfer

MyAnimeList Manager 🔗   Jan 2021 – Feb 2021
- Created a mobile-friendly website using **React** and **Bootstrap** to manage user MyAnimeList accounts
- Leveraged Jikan API to implement search functionality, displaying and parsing **200+ data points per second**
- Engineered an API backend using **Node.js** and **Express** to securely authenticate users using OAuth 2.0

Mask Monitor 🔗   Jan 2021
- Spearheaded the usage of Git on a **team of 4** to facilitate collaboration and **increase productivity by 20%**
- Connected OpenCV webcam footage to a mask detection model, displaying results with Flask and Bootstrap
- Detected whether individuals were wearing a mask with a **91% accuracy** after training with 5,000 images

EXPERIENCE

City of Markham   Markham, ON
Assistant Badminton Coach   Apr 2018 – Jun 2018
- Increased students' overall **game scores by 20%** and **win-rate by 10%** over the course of three months
- Cooperated with 2 other coaches to expedite training sessions, leading to an extra **15 minutes** each lesson

EDUCATION

University of Waterloo
Candidate for Bachelor of Computer Science   Sep 2020 – Present
- Term Distinction, Fall 2020 & Winter 2021 (GPA: 3.96, CAV: 94.40%)