Brian Hu

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Education

McGill University – Montreal, Canada Sep. 2019 – May 2023E
Bachelor of Science, Honors Computer Science, Minor in Statistics
cGPA: 4.00 / 4.00
Awards: Dean's List, Faculty of Science Scholarship, MES Bourses d'excellence en sciences, Wing Hing Chan Scholarship in Science

Experience

CloudOps Aug. 2021 – Dec. 2021
Cloud Developer Intern
- Implemented full-stack features using **Java Springboot** and **Vue.js** of a multi-cloud management SaaS platform, integrating REST APIs of public and private cloud platforms
- Identified database performance issues using **Elastic APM** and **Kibana**, refactored code to reduce latency by 70%+
- Created and modified **MySQL** tables based on new platform integrations and feature requirements
- Developed unit tests using **Groovy** (Java) and **Jest** (Vue.js) with 90%+ code coverage
- Completed tasks and key deliverables using Agile development process with **Jira** and **Jenkins** CI/CD pipeline

Enactus McGill Jul. 2021 – Oct. 2021
Web and Software Development Coordinator
- Coordinated development for front-end of full-stack web application using **React.js** and **Material UI**
- Integrated front-end with back-end using **Redux** and **MongoDB** for state and database management
- Planned for continuation of project with club executives and established key design decisions for future improvements

Data-Intensive Storage and Computer Systems Lab, McGill University Apr. 2021 – Aug. 2021
Undergraduate Researcher
- Conducted research project focusing on NoSQL systems design for real-time data analytics funded by NSERC USRA
- Developed and ran representative data analytics benchmark in **C++** to simulate social media workload in **RocksDB** to identify significant bottlenecks in database performance
- Increased read/write performance and overall throughput by 200%+ after re-designing memtable value structures

Projects

Full Stack Marathon Training App https://github.com/BriannHu/MarathonTrainer
- Web application using **React.js**, **Material UI** & **React-Chart-js2** for front-end dashboard
- Implemented authentication (Google OAuth) and state management using **Redux**
- Allowed creation and saving of runs as well as exporting runs into CSV file using **MongoDB**, **Express** & **Node.js**

ASL Interpretation App https://github.com/BriannHu/ASL_Alphabet_Interpretation
- **Python** application that converts detected ASL gestures to English Alphabet
- Incorporated **Mediapipe** library to enable detection and categorization of hand landmarks as distinct ASL gestures
- Integrated **OpenCV** to provide video analysis of gestures and convert output to screen in real-time

Reddit Sentiment Analysis Project https://github.com/BriannHu/Reddit_Sentiment_Analysis
- Team project analyzing posts from liberal and conservative subreddits to determine engagement surrounding 2020 US election, regarding perceptions of election legitimacy and other topics such as foreign policy, pandemic response, etc.
- Collected, processed and annotated posts gathered from Reddit API using various **Python** libraries
- Characterized posts by topics using NLP techniques and produced final written report discussing findings

Technical Skills

Languages: Java, Python, C, C++, Javascript/HTML/CSS, OCaml, R, SQL
Frameworks and Libraries: React.js, Material UI, Vue.js, Node.js, Springboot, Groovy, Jest
Tools: Git, Jira, Jenkins, AWS (EC2), RocksDB, Unix