

# Brian Hu

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## Education

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**McGill University** – Montreal, Canada

Exp. Graduation: May 2023

Bachelor of Science, Honors Computer Science, Minor in Statistics

GPA: **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

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### CloudOps

Aug. 2021 – Present

*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
- Improved monetization features such as tax provider configuration and monthly invoice generation
- Created and modified **MySQL** tables based on new platform integrations and feature requirements
- Developed unit tests using **Groovy** (Java) and **Jest** (Vue.js) with above 90% code coverage
- Completed tasks and key deliverables using Agile development process with **Jira** and **Jenkins** CI/CD pipeline

### Enactus McGill

July 2021 – Oct. 2021

*Web and Software Development Coordinator*

- Coordinated development for front-end of full-stack web application using **React.js** and **Material UI** framework
- Integrated front-end with back-end using **Redux** and **MongoDB** for 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*

- 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 using **RocksDB** to identify significant bottlenecks
- Increased read/write performance and overall throughput by over 200% after re-designing memtable value structures

## Projects

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### 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](https://github.com/BriannHu/ASL_Alphabet_Interpretation)

- **Python** application that converts detected ASL gestures to English Alphabet
- Used **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](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

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**Languages:** Java, Python, C, C++, Javascript/HTML/CSS, OCaml, R, MIPS, SQL

**Frameworks and Libraries:** React.js, Material UI, Node.js, Vue.js, Springboot, Groovy, Jest

**Tools:** Git, Jira, Jenkins, RocksDB, Unix, AWS (EC2), Heroku