

# Ezra Huang

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## EDUCATION

Sep 2023 - pres.      McGill University  
B.Sc. (Honours) in Computer Science and Mathematics. GPA: 4.0.

## PROJECTS

Feb 2024 - pres.      **RL** paper implementations  
PyTorch implementations and reproductions of reinforcement learning papers, including DQN-based (DQN, PER, Double DQN, Dueling DQN, NoisyNets, Rainbow DQN), distributed DQN (ape-x), and PPO-based models (PPO, AlphaZero, MuZero).

Jan 2024- pres.      **Mcgill Neurotech**, software team member  
Chose and used communication protocols (LSL, Zero MQ) between different back end processes to achieve low-latency communication to support live classification done by the machine learning team.  
Built a data collection platform, processing gigabytes of electroencephalogram data with python to be fed into machine learning models.

2023 - 2024      **Family photo server**  
Built a fullstack application with a React frontend, Backblaze B2 bucket storage, go endpoints, and Cloudflare web workers, reducing costs by 44% by utilizing backblaze instead of AWS and free data egress with a Cloudflare Web Worker. Ensured security by researching and implementing the OAuth2.0 authorization framework (RFC 6749), using an NGINX reverse proxy to enable HTTPS with a LetsEncrypt certificate.

2022      **Materials informatics experiments**, IB EE  
Trained and compared the performance of different classic supervised ML models (KNN, SVM, random forests, gradient boosting) on materials informatics tasks (property prediction) with skikit-learn.

## EMPLOYMENT

Aug 2024 - pres.      **Residence Life Facilitator**, McGill University  
Plan and host events for incoming students to build communities in McGill's residences

2023      **Freelancing**, The Accounting Connection Ltd.  
Setup, configured, and maintain servers (ongoing) that allow employees to share access to remote desktops and files. To date, over 2 TB of data has been transferred over the network, with 99.9% uptime since deployment.

2022      **Software developer intern**, Xerris Inc.  
Used React, Typescript, GraphQL, react-dnd, mobx-state-tree, and TailwindCSS to build the frontend of a planner app that allows dispatchers to plan logistic resources.

## AWARDS

2023      **Richie Best In The West**  
McGill University entranncy bursary (\$10000) for outstanding academic achievement and extracurriculars in high school.

## SKILLS

**Web development** React, TailwindCSS, NextJS, Apollo GraphQL, MobX

**Machine Learning** scikit-learn, PyTorch, Tensorflow

**Languages** Typescript, C++, Java, Python, Go

**Tools** GNU/Linux, AWS, Git, Jira,  $\text{\LaTeX}$