



# Jonathan Hu




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


## EDUCATION

- **Cornell University**  **GPA: 4.0**  
*Master of Computer Science; Specialization in Machine Learning* Aug 2023 - Dec 2024
- **University of British Columbia**  **GPA: 4.0**  
*Bachelor of Commerce, Combined Major in Computer Science and Business* Sep 2020 - May 2023
  - **Academic Ranking:** 1st among all program peers, 5th in faculty (**Top 0.5%** of 908 students).
  - **Distinction:** Accelerated a rigorous four-year program, completing all requirements in three years—a program's first.
  - **Relevant Coursework:** Large-Scale Machine Learning Systems, NLP, Computer Vision and Robotics, Deep Learning, Computer Architecture, Theory of Computing, Distributed Computing, Databases, Networking, Financial Engineering.



## WORK EXPERIENCE

- **Cornell University**  Ithaca, New York  
*Machine Learning Graduate Researcher* Sep 2023 - Present
  - Leading the continuous optimization of a NYC restaurant recommendation system. Integrating advanced LLMs using proprietary Yelp and Google datasets, employing Flask, and managing 2 million+ MongoDB records with Expo hosting.
  - Proactively refining data pipeline, resulting in a 90% decrease in data anomalies and a 20% boost in model accuracy.
- **Amazon Web Services**  Vancouver, Canada  
*Software Development Engineer Intern* Apr 2023 - Aug 2023
  - Revitalized business process workflow dashboards, empowering dynamic, real-time monitoring and facilitating immediate, data-driven decision-making for AWS Commerce Platform.
  - Engineered and deployed a TypeScript package to automate wiki creation through CDK, drastically reducing ticket volume by 40% through the strategic enrichment and restructuring of user-friendly service dashboards.
  - Architected and seamlessly integrated a scalable Java software component to produce and inject customized workflow metrics into AWS CloudWatch, doubling available metrics and halving ticket resolution time.
- **Shenzhen Youpin Cosmetics Tools Co., Ltd.**  Shenzhen, China  
*Software Development Engineer (Contract Part-Time)* Jan 2022 - Jul 2022
  - Secured and executed a **\$12,000** contract to develop and deploy an inventory management app using Java and MySQL.
  - Centralized inventory management across 4 departments, saving 100 labor hours yearly and decreasing errors by 10%.

## RESEARCH EXPERIENCE & PROJECTS

- **Sentiment Analysis on IMDb Reviews:** Engineered an end-to-end sentiment analysis application utilizing CNN and Transformer models for natural language processing. Implemented data preprocessing, model tuning, and evaluation in Python, improving prediction accuracy by 42%. Deployed the models as RESTful APIs using Flask within Docker containers, ensuring scalability and ease of use. Incorporated unit tests and CI/CD pipelines for robust development workflow and automated deployment.
- **York University CVR-VISTA Vision Science Summer Research**  : Directed an electroencephalogram (EEG) research project in July 2023 to analyze neural responses to various driving conditions. Leveraged scikit-learn and PCA for feature extraction and dimensionality reduction, while normalizing data via Min-Max scaling. Built predictive models using TensorFlow, employing various deep learning architectures such as Convolutional Neural Networks (CNNs) with ReLU activation, and SGD optimization. Utilized back-propagation for training and applied L1/L2 regularization.
- **Job Central**  : Engineered a full-stack job query app using Spark, PostgreSQL, and React. Built RESTful APIs to execute CRUD operations via Oracle JDB. Implemented advanced search filters to improve the job-matching process for users.
- **Pomodoro Study**  : Created a Java desktop app to boost productivity, featuring an intuitive GUI using Swing. Integrated an AudioInputStream for customizable music and implemented data persistency to maintain checklist items across sessions.

## LEADERSHIP EXPERIENCE

- **Cars and Hoops Foundation**  Vancouver, Canada  
*Vice President of Operations* Nov 2021 - Present
  - Amplified fundraising campaigns that raised over **\$200,000** for Canuck Place Children's Hospice.
- **Varsity Basketball**  Richmond, Canada  
*BC Regional MVP 2020, Richmond City League All-Star 2020* Sep 2015 - May 2021
  - Excelled as team captain and led the team to its inaugural provincial championship in 18 years.

## SKILLS SUMMARY

- **Languages:** Python, C, Golang, C++, Java, R, SQL, Typescript, Matlab, Scala
- **Technologies:** TensorFlow, PyTorch, Keras, NumPy, Matplotlib, Flask, OpenCV, Pandas, Spark, Docker, AWS, Git