

# Jonathan Hu

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## EDUCATION

- **Cornell University** **GPA: 4.0**  
*Master of Engineering, Computer Science; Specialization in Artificial Intelligence* *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 Standing:** Ranked 1st among program peers, 5th in faculty (**Top 0.5%** of 908 students); expedited graduation in 3 years—a program first.
  - **Relevant Coursework:** Advanced courses in Machine Learning, Natural Language Processing, Computer Vision, Artificial Intelligence, Distributed Computing, Networking, and Project Management.
  - **Scholarships & Awards:** Dean's Honour List; Outstanding Student Entrance Scholarship (\$20,000); 2 x Sauder School of Business Scholarship (\$10,000); 2 x Trek Excellence Scholarship (\$4,000); Naomi Grigg Scholarship (\$955).

## WORK EXPERIENCE

- **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 cutting-edge Java software component to produce and inject customized workflow metrics into AWS CloudWatch, resulting in a 2x surge in metric availability and cutting ticket resolution time in half.
- **University of British Columbia** [↗](#) Vancouver, Canada  
*Lead Teaching Assistant* *Dec 2020 - May 2023*
  - Collaborated with faculty to deliver courses in Software Engineering, Computer Systems, and Algorithm Design.
  - Achieved a 100% favorable student rating through the meticulous refinement of lab materials across 12+ sections.
  - Spearheaded training initiatives for 80 teaching assistants, substantially elevating the department's instructional quality.
- **Shenzhen Youpin Cosmetics Tools Co., Ltd.** [↗](#) Shenzhen, China  
*Software 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.
  - Optimized inventory turnover rates by 25% across 7 product lines and 8 material categories.
  - Centralized inventory management across 4 departments, enhancing accuracy by 10% and cutting labor hours by 50%.

## RESEARCH EXPERIENCE & PROJECTS

- **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.
- **University Blueprint** [↗](#) : Collaborated with an agile development team to create a comprehensive full-stack web application focused on course planning and analytics within an 8-week sprint cycle. Achieved flawless test coverage by implementing 250+ automated tests, leveraging Mocha and Chai frameworks. Enhanced the application's capability by incorporating EBNF syntax for sophisticated trend analysis and utilized Yarn for streamlined package management.
- **Pomodoro Study** [↗](#) : Created a desktop app to boost productivity, featuring an intuitive GUI using Java 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.
  - Orchestrated strategic partnerships with Lucid, Ledcor, ASPAC Developments, and National Bank of Canada.
- **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++, Java, R, SQL, Typescript, Matlab, Scala
- **Technologies:** TensorFlow, PyTorch, OpenCV, Pandas, spaCy, Spark, Kubernetes, Docker, AWS, Azure, Git, Kafka
- **Quantitative:** Statistical Modeling, Time-Series Analysis, Algorithmic Trading, Risk Management, Optimization