IAN QUAN

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EDUCATION

University of Toronto   **May. 2025**
Honors Bachelor of Science, Double Major in Computer Science and Statistics   *CGPA: 3.6/4.0*
- **Relevant Coursework:** Data Structures, Algorithm Design, Database Management, Operating Systems, Systems Programming, Computer Networks, Software Design, Machine Learning, Deep Learning, Computer Vision

EXPERIENCE

Shopify   **Jan. 2025 – Apr. 2025**
Software Engineer Intern | *Ruby on Rails, React.js, TypeScript, GraphQL*   *Toronto, ON*
- Contributing to Shopify Collective.

S&P Global   **Sep. 2024 – Dec. 2024**
Software Engineer Intern | *Java, React.js, TypeScript, MySQL, Azure DevOps*   *Toronto, ON*
- Contributing to S&P Global Rating's Structured Finance Team to **develop an application for automated credit rating letter generation**, replacing Excel marocs, which accelerated letter generation by **50%** and used by **1500+** credit analyst
- Designed scalable **microservices** using **Kubernetes** and developed **SOAP/REST APIs** with **Spring Boot**
- Integrated automated **API testing** with **Postman** and **unit testing** with **JUnit**, increasing testing coverage by **70%**
- Leveraged **Agile** development using **Azure DevOps** and weekly sprints, streamlining workflows through **CI/CD** pipelines

University of Toronto, Department of Economics   **Apr. 2024 – Present**
Undergraduate Researcher | *BERTopic, Cohere Embed v3, Python*   *Toronto, ON*
- **Built a topic modeling pipeline and conducted data preprocessing** on **1000+** China policy documents using **Python**
- Clustered key topics using **BERT topic model** and conducted topic matching using **natural language processing (NLP)** methods
- Performed research on key topics using **regression** to identify correlations across geographical, demographic, and temporal datasets

Global Health Core Inc.   **Apr. 2024 – Aug. 2024**
Full-Stack Web Developer Intern | *React.js, TypeScript, Next.js, MongoDB, Material UI*   *Toronto, ON*
- Led a web development team in an early-stage start-up in the healthcare sector
- **Developed a patient dashboard that centralizes health data**. Reduced UI render time by **25%** for complex patient data interactions by implementing **Redux** for state management
- Optimized data retrieval by implementing a **NoSQL** database, improving system scalability to handle **3x** the users

0Barriers   **Jan. 2024 – Apr. 2024**
Software Developer | *React.js, JavaScript, Node.js, MongoDB, AWS*   *Toronto, ON*
- **Developed a configurable WCAG violation webpage scanning app** with **MERN** stack and deployed through **AWS S3**
- Incorporated visual data insights in the compliance reports, reducing compliance review time by **30%**
- Led the implementation of configurable parameters for webpage scans using **Puppteer**, enabling real-time simulation

PROJECTS

MeetHomie | *Django, React.js, JavaScript, REST API, Material UI, Tailwind CSS*   **Jan. 2024**
- **Developed a lightweight scheduling app to streamline coordination of one-on-one meetings**
- Designed and implemented a preference-based matching algorithm to optimize scheduling for mutual convenience
- Enhanced platform security by integrating **JWT authentication**, ensuring robust token-based user verification

J2C Translator | *Python, NumPy, PyTorch, Pandas, NLP, Deep Learning*   **Nov. 2023**
- **Created the first Jyutping to Chinese Character translator** with a **94%** test accuracy using **Transformer Model**
- Performed **data cleaning** and **word embedding** on over **18,000** training examples from Cantonese dialogue datasets
- Enhanced validation accuracy by **17%** over the baseline model through hyperparameter tuning with **RayTune**
- Designed a weighting mask to solve the homophone ambiguity problem in J2C translation, increasing **7%** in accuracy

SKILLS

Languages: Python, JavaScript/TypeScript, Java, C
Database: MongoDB, PostgreSQL, MySQL, SQLite
Frontend Development: React.js, HTML/CSS, Next.js, Bootstrap, Tailwind, Material UI, Redux

Developer Tools: AWS, Azure, CI/CD, Docker, Linux
Project Management: Jira, Agile, Git, Azure DevOps
Backend Development: Node.js, Django, Flask, Postman