

SKILLS

Programming Languages	Python, R, SQL, NoSQL(Redis), Java, JavaScript, C/C++, Linux OS
ML & AI Frameworks	PyTorch, TensorFlow, scikit-learn, XGBoost, LightGBM, OpenCV
Data Analysis & Visualization	Pandas, NumPy, Matplotlib, Seaborn, Excel, PowerBI
NLP & LLM Tools	GitHub Copilot, ChatGPT, Deepseek, Dify
Development Tools	Git, Jupyter, PyCharm, VScode

EDUCATION

Master of Management Analytics, Rotman School of Management, University of Toronto GPA: 3.73 / 4.0   Vector AI Scholarship (2025)   Entrance Scholarship (2025)	Aug 2025 - Jun 2026 (Expected)
Master of Engineering - Electrical & Computer Eng, University of Waterloo GPA: 90.50/100 (4.0/4.0)   Specialization in Software and Machine Learning	Sept 2021 - Oct 2022
Bachelor of Engineering - Mechatronics Eng, McMaster University GPA: 10.42/12 (3.7/4.0)   Dean's Honour List (2018, 2019, 2021)   McMaster Award, Level 3 (2017)	Sept 2017 - Jun 2021

EXPERIENCE

Marketing Analyst / BMO Practicum - Customer Lifetime Value & Persona Segmentation Models (Ongoing)	Jan 2026 — Jun 2026 (Expected) Toronto, Canada
<ul style="list-style-type: none"><li>Built a 12-month forward revenue model for 4.5M+ U.S. customers using <b>Lasso, Random Forest, and XGBoost</b> to support value-based targeting.</li><li>Constructed a 36-month customer-month analytical dataset with 30+ engineered features, addressing revenue volatility and data quality gaps.</li><li>Applied tenure-based segmentation and expanding-window time validation to improve prediction stability across lifecycle stages.</li><li>Developed persona clustering (<b>K-Means/GMM</b>) integrating predicted CLV outputs to identify high-return customer segments.</li><li>Designed a pre-campaign <b>ROI</b> simulation framework enabling data-driven campaign selection and marketing prioritization.</li></ul>	
LLM Engineer / Nanjing Yuanquan Software Technology Co., Ltd. Part-time - AI-driven Global Customer Acquisition & Growth Platform	Feb 2025 — Jun 2025 Nanjing, China
<ul style="list-style-type: none"><li>Collaborated with a 3-member team to prototype a <b>24/7 customer support chatbot</b>, automating inquiries and reducing manual workload.</li><li>Experimented with multiple <b>LLMs</b> (GPT, DeepSeek, Claude), designing flows and prompts in <b>Dify</b> and tuning parameters (e.g., embedding dimensions) to improve response relevance.</li><li>Integrated a <b>RAG</b> pipeline with the company's knowledge base for context-aligned domain-specific responses.</li><li>Implemented LLM-based <b>sentiment classification</b> within <b>Dify</b> flows to dynamically adjust response tone and style.</li><li>Evaluated prototypes on accuracy, latency, response quality, and error recovery, identifying configurations with deployment potential.</li></ul>	
AI Trainer / Outlier Part-time - Outlier's Language Writing Model	Apr 2024 — Feb 2025 Remote, Canada
<ul style="list-style-type: none"><li>Evaluated 100+ AI <b>prompt-response pairs</b> using rubrics and pairwise comparisons to assess quality and preference.</li><li>Scored and ranked model outputs on factual accuracy, coherence, and contextual relevance, generating high-quality training signals for <b>RLHF</b>.</li><li>Provided structured feedback and annotations to refine datasets, improving <b>LLM</b> alignment, safety, and output quality.</li></ul>	

PROJECTS

Image Captioning Model Comparison - CNN+LSTM vs ViT+Transformer	Nov 2025 - Dec 2025
<ul style="list-style-type: none"><li>Built an experimental pipeline on the MS COCO dataset 2024 to compare <b>CNN+LSTM</b> and <b>ViT+Transformer image captioning</b> architectures.</li><li>Evaluated models using <b>BLEU-1/2/4</b> and qualitative examples to analyze differences in caption accuracy, fluency, and error patterns.</li><li>Analyzed the impact of hyperparameters (e.g., embedding size, vocabulary size, teacher forcing, layer freezing) on model performance and computational efficiency.</li></ul>	
GR8 Summer Stay - Property Recommender	Aug 2025
<ul style="list-style-type: none"><li>Collaborated with a 5-member team to build a property recommender in <b>Python</b> using <b>Sentence-BERT</b> embeddings and an <b>LLM</b> advisor.</li><li>Developed a CLI and <b>Streamlit</b> front end with semantic matching, <b>SQLite</b>-based user management, chat, wish list, filters, and map features.</li><li>Integrated an AI travel agent chat (OpenRouter LLM) for secure, personalized property recommendations and travel advice.</li></ul>	
Tripedia - Tour Sharing Website for Posting and Exchanging Travel Experiences	Jan — April 2022
<ul style="list-style-type: none"><li>Built a full-stack <b>RESTful tour web application</b> in a 6-member team with a <b>Java SpringBoot</b> backend and <b>React.js</b> frontend.</li><li>Integrated <b>Amazon RDS/S3</b> for secure storage, <b>Spring Data JPA</b> for database access, and <b>Google Map API</b> for location features.</li><li>Ensured reliability through <b>JUnit5</b> unit testing and <b>SonarQube</b> code analysis (85% coverage), and deployed on <b>AWS EC2</b> with load balancing.</li></ul>	

COMPETITIONS & ACCOMPLISHMENTS

- 1st Place**, Canadian University Chess Championship 2020 (Under 1800 Section).
- 2nd Place**, Calian Case Competition: Built an AI-driven framework in **Python** using K-Means for customer segmentation and RF, LR, XGBoost, and KNN for churn prediction for a restaurant-arcade brand.
- 2nd Place**, McMaster Engineering Competition 2020: Developed a COVID-19 Tracker with an interactive visualization map.
- Top 16**, Sumobot Competition 2018: Developed a 10x10cm autonomous robot against 64 teams.
- Participation Award**, CIBC Case Competition: Proposed an AI-driven investing framework for Simplii under CIBC to engage Gen Z investors.
- Participation Award**, RoboMaster 2021 Robotics Competition: Developed color and number detection algorithms using **Python OpenCV**.
- Ongoing Participation**, Scotiabank Case Competition: developing explainable AML models to identify suspicious customers and risk drivers.