

Xiaoshuai (Samario) Liu

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EDUCATION

Honour Bachelor of Science, University of Toronto <i>Computer Science Specialist, Data Science Specialist, Art and Science Internship Program (co-op)</i>	2028 (Expected) Toronto, ON
<ul style="list-style-type: none">• CGPA: 3.84• Achievements: Dean's List 2025	
STA130 Introduction to Statistical Reasoning and Data Science	Sep 2024 – Dec 2024
Social and Emotional Factors Affecting Mental Well-being <i>Python, Jupyter, NumPy, pandas</i>	
<ul style="list-style-type: none">• Analyzed the CSCS dataset using Python (pandas, NumPy) to perform data cleaning, variable selection, and exploratory analysis of social-emotional indicators.• Applied linear and logistic regression and hypothesis testing to quantify how emotional support and social connection influence subjective happiness scores.• Presented results at an academic research fair, communicating complex statistical findings clearly to non-technical audiences.• Led the 4-member team for a poster fair project, organizing weekly meetings, and tracking progress to ensure on-time completion.	
CSC111 Foundations of Computer Science II	Jan 2025 – Apr 2025
Content-based Game Recommender <i>Python, pandas, NumPy, Scipy, streamlit, Network Analysis</i>	
<ul style="list-style-type: none">• Engineered a game-recommendation model using Python and similarity-based algorithms, applying pandas and NumPy for data manipulation.• Optimized model performance by analyzing user-game relationships with network metrics and statistical evaluation using SciPy.• Implemented a Streamlit dashboard for interactive visualization of the network connection between recommended game.• Collaborated in a team environment, using Git for version control and integrating peer feedback to refine model design.• Coordinated disagreements on the projects planning between members at beginning stage to ensure aligned goals and workflow continuity.	
CSC207 Software Design	Sep 2025 – Dec 2025
Stock Analysis Desktop App <i>Java, Swing, Clean Architecture, Maven, JUnit, Finnhub API</i>	
<ul style="list-style-type: none">• Built a modular stock application in Java/Swing using Clean Architecture to keep UI, domain logic, and data access decoupled.• Integrated the Finnhub REST API with OkHttp and org.json to fetch real-time market status and financial news.• Implemented a News feature that lets users view top market news or filter company news by symbol and date; designed a Swing table UI with scrollable headlines, summaries, and clickable links/images that open in the browser.• Wrote unit tests for the Interactor with JUnit and in-memory DAOs/presenters, achieving 95% line coverage of core use case logic.• Collaborated in a 6-member team, using Git for version control and integrating peer feedback to improve code.	
CSC258 Computer Organization	Sep 2025 – Dec 2025
Columns Game <i>MIPS Assembly</i>	
<ul style="list-style-type: none">• Designed and implemented a complete Columns-style puzzle game in MIPS assembly, using memory-mapped I/O for a 256×256 bitmap display and keyboard input.• Carefully managed register conventions and stack frames to support nested subroutines and maintain correctness across complex control flow.	

PROJECTS

Urban Metro Review Analysis

Apr 2025

| *Python, SQL, LLM API, Data Visualization*

- Designed and executed SQL queries to join, filter, and aggregate multi-table datasets (users, reviews, stations), preparing structured inputs for statistical modelling.
- Applied a Large Language Model (LLM) API to classify passenger feedback by sentiment and key service attributes.
- Visualized satisfaction patterns and sentiment trends using Matplotlib and Plotly.
- Served as data processing assistant, ensuring timely progress updates.

JOB EXPERIENCE

Summer Camp Teaching Assistant

June 2024 – Sep 2024

Vision Academy Company

Shanghai, China

- Guided students through laboratory experiments, ensuring safety and reinforcing theoretical concepts.
- Assisted in delivering physics instruction for senior high school student preparing for Olympiad-level competitions.
- Provided daily summaries of key lessons on paper to consolidate learning outcomes.
- Helped students manage stress and stay motivated when facing challenging material, fostering a positive and supportive learning environment.

TECHNICAL SKILLS

Languages: Python, Java, SQL (Postgres), R, MIPS Assembly

Tools: Git, Google Cloud Platform, VS Code, PyCharm, Jupyter

Libraries: pandas, NumPy, SciPy, Matplotlib, Plotly