

# AARON LIU

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## Education

### University of Toronto

*Honours Bachelor of Science (Computer Science, Statistics, Mathematics)*

**Sept. 2019 – Jun. 2025**

*Mississauga, ON*

## Technical Skills

**Languages:** Python, Java, HTML, SQL, R, CSS, Javascript, React, C

**Technologies/Frameworks:** Amazon AWS, Excel, Power BI, Git, React, ServiceNow, JIRA, Atlassian

## Relevant Coursework

- Deep Learning/Neural Networks
- Data Structures and Analysis
- Machine Learning
- Databases
- Artificial Intelligence
- Software Design
- Algorithm Design and Analysis

## Experience

### National Bank of Canada

*Junior Analyst*

**Aug. 2022 – Sept. 2023**

*Toronto, ON*

- Used Excel to create spreadsheets, graphs, and pivot tables to summarize large data sets of up to 10k records.
- Maintained and optimized SQL scripts, decreasing query time by 20%, ensuring timely and accurate delivery of reports tailored to business needs.
- Automated data intake with Python, classifying and routing incoming files into a standardized folder hierarchy, reducing manual sorting time by 15%.
- Created tables and graphs using AWS Quicksight and Power BI for improved business analytics and data visualization.
- Created standardized JIRA ticket templates and scripting routines, streamlining triage workflows and boosting team productivity by 25%.

## Projects

### Clipboard Manager | C, Win32 API

- Designed a clipboard management utility in C that tracks and stores multiple clipboard entries.
- Implemented Windows API integration for system clipboard monitoring and manipulation.
- Created an interactive console interface with real-time clipboard tracking.
- Designed efficient memory management for storing and retrieving text content.

### Artistic Style Transfer with CycleGANs and Pre-trained Discriminators | Python, Git

- Using the CycleGAN architecture, created a generative AI model capable of transforming real-world photographs into impressionist style paintings.
- Incorporated pre-trained discriminators as binary classifiers to improve style fidelity and content accuracy.
- Implemented using Python and deep learning frameworks including TensorFlow, PyTorch, and Scikit-Learn.

### MySQL to AWS RDS Migration | Python, AWS, Pandas

- Developed a Python script to facilitate the migration of data from the MySQL database to AWS RDS database.
- Used Pandas to connect and retrieve rows and columns from the MySQL database.
- Implemented schema validation and data-integrity checks, ensuring 100% accuracy.
- Connected to the RDS database with Boto3 to recreate the tables, columns, and rows, reducing costs by 10%.

### Outlook Email Archive | Python, Outlook API, Scrum

- Built a Python script to automate the archiving of incoming emails from Outlook.
- Connected to Outlook to read inbox emails, extracting the email contents and attachments using O365.
- Moved email contents to designated archive folder based on sender, storing the information by date.
- Implemented inbox specific customizations, such as scraping email content, reducing manual triage by 20%.
- Scheduled the archiving script via Windows Task Scheduler, ensuring hourly, fully automated email archiving.

### Online Game Store Simulator | Java, Agile

- Collaborated in a team using Scrum methodology to develop a Java-based online game store simulator.
- Designed features to simulate functionalities of online markets, such as user account creation, fund management, and game transactions.
- Implemented a modular system using object-oriented programming (OOP), leveraging inheritance to improve scalability and code reuse.