

# ALEXANDER MARINKOVICH

416-704-3241 | [alex-989@live.com](mailto:alex-989@live.com) | [LinkedIn](#) | [Github](#) | [Portfolio](#)

## EDUCATION

### Queen's University

B.S. Computer Science

- GPA: 4.08 / 4.3
- Awards: Dean's Honour List, Principal's Scholarship, E.D. Merkley Prize in Mathematics

Kingston, ON

Sep. 2022 – May 2027

## EXPERIENCE

### Data Scientist Intern

May 2025 – Dec. 2025

Scotiabank

Toronto, ON

- Automated the generation of quarterly financial reports by extracting and analyzing key metrics from Excel sheets and internal data sources, **reducing manual work by 50%**
- Applied Generative AI techniques to summarize **100+ Scotia Economics articles per quarter**, surfacing insights on current events and economic trends relevant to stakeholders
- Integrated natural language summaries with structured financial data, improving report clarity and cutting average report turnaround time **from 80 hours to 40 hours**

### Software Engineer Intern

May 2024 – Aug. 2024

Scotiabank

Toronto, ON

- Leveraged **Generative AI** to summarize, compare, and assess risks in qualitative financial data, replacing *Boost AI* and achieving a **cost-saving of \$8 million per year**
- Ingested and processed **10 GB of data** from Edgar forms and earnings calls into **Google BigQuery** for scalable analysis
- Utilized **sentiment analysis** to analyze qualitative financial data for investment decisions with high accuracy

### Teaching Assistant

Jan. 2025 – Apr. 2025

Queen's University

Kingston, ON

- Provided guidance and support to **100+ students** in the **Data Structures** course
- Graded assignments and exams, ensuring **fair and consistent evaluation** of student performance
- Conducted weekly office hours to assist students in mastering **complex data structures and algorithms**

## PROJECTS

### MCTraps.com | React, TypeScript, Firebase, Node.js

- Launched a **full-stack web platform** teaching Minecraft players how to build traps
- Engaged **10k+ monthly active users** through content sharing, ratings, and community discussions.
- Engineered a **secure, scalable backend** featuring Firebase, OAuth2 authentication, and automated media optimization

### Reward Search | Python, PyTorch, Pandas, Numpy

- Co-Developed *Reward Search*, a novel **loss function** and **information retrieval architecture**, from scratch
- Co-authored a research paper** detailing the model's capabilities and performance in the word game Codenames
- Achieved efficient training on mid-range commercial hardware, with all parameters stored in a compact **50MB file**

### Concussion MD | Python, Flask, OpenCV

- Created a web application that can determine if a patient has a concussion by analyzing the patient's pupil radii and comparing their dilation **using computer vision**
- Winner of the **QHacks \$1,000 DDQIC Sponsored Prize** for the use of technology to provide greater access to specialized medical care to rural and remote areas

## TECHNICAL SKILLS

**Languages:** Python, Java, C, C++, SQL, JavaScript, TypeScript, HTML, CSS

**Frameworks:** Pandas, NumPy, PyTorch, React, Node.js, Scikit-Learn, Matplotlib, Flask, PyQt

**Databases:** MySQL, BigQuery, PostgreSQL, Firebase (Firestore & Realtime Database), MongoDB (SQL & NoSQL)

**Tools:** Git, Linux, GCP, VS Code, F Prime