

Radmehr Vafadar

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EDUCATION

Queen's University

Bachelor of Computing (Hons.) Specialization In - Cognitive Science

Kingston, ON

Aug. 2023 – May 2027

Google CyberSecurity Certificate

Professional Certificate

June 2025 – Aug. 2025

EXPERIENCE

Machine Learning Project Lead

Queen's University

July 2025 – August 2025

Kingston, ON

- Led a 4-person team to develop and deploy a machine learning model for fake news detection (link), utilizing a large dataset
- Utilized scikit-learn to develop a Passive Aggressive Classifier for efficient and accurate fraudulent news detection
- Managed the full software development life cycle, emphasizing clear communication and collaborative problem-solving to ensure project success

Independent Researcher

Queen's University

April 2025 – June 2025

Kingston, ON

- Designed and coded a simulation to model flocking behavior using the boids algorithm (link), exploring properties in a virtual environment
- Utilized linear regression to analyze simulation data, deriving insights into agent coordination and system dynamics (link)
- Optimized simulation efficiency and deployed complex simulations in a browser environment using JavaScript and TypeScript

Teaching Assistant

Queen's University

September 2025 – Present

Kingston, ON

- Led labs and tutorials to reinforce core programming concepts for first-year engineering students
- Graded assignments, quizzes with accuracy and fairness
- Standardized grading through collaboration with instructors and fellow TAs
- Prepared classrooms, maintained course websites, and resolved technical issues
- Completed training to enhance teaching effectiveness and subject knowledge

PROJECTS

Distributed Video Streaming (link) | *Python, Kafka, Java, Unix/Linux*

September 2025 – Present

- Implemented a real-time distributed video streaming pipeline using Kafka, Python, OpenCV, and Flask, enabling seamless transmission and web-based playback of video frames from multiple sources
- Designed the system to support both live webcam and video file inputs, with scalable architecture for multi-producer and multi-consumer setups across Kafka clusters
- Leveraged Docker for consistent environment setup and simplified deployment of Kafka and Zookeeper services, ensuring robust cross-platform functionality

Mine Sweeper (link) | *Python, Pygame, Aseprite*

August 2025 – Present

- Developed a fully interactive Minesweeper game in Python using Pygame, with a dynamic 16x16 grid and 40 randomly placed bombs
- Implemented logic to display the number of adjacent bombs after each user click
- Integrated a seamless tool selection toggle for switching between bomb placement and flagging modes during live gameplay

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R

Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI

Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse

Libraries: pandas, NumPy, Matplotlib