

# Roozbeh Ali

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## EDUCATION

### University of Waterloo

BASc, Computer Engineering

Waterloo, ON

Sept. 2023 – Jun. 2028

### Glenforest SS

IBDP, OSSD

Mississauga, ON

Sept. 2019 – Jun. 2023

## EXPERIENCE

### Beavr Labs | *TypeScript, React, Redux, Git, Chakra-UI, Prisma*

Front end developer

Jul. 2022 – Dec. 2022

Mississauga, ON

- Wrote readable and optimized React/TypeScript code
- Created minimal and accessible UI components using Chakra-UI
- Built user flows for depositing/withdrawing CAD and BTC, and interactive transaction history tables from scratch
- Used REST API's to interact with back end Prisma database and manipulate user information (e.g. transactions, legal information, banking information)
- Optimized loading times on user onboarding flows by 30% by eliminating redundant API calls

### FRC 6070: Gryphon Machine | *Java*

Programming Captain and Driver

Sept. 2022 – Jul. 2023

Mississauga, ON

- Programmed majority of 2023 season robot's functions/movements using Java and WPILib
- Used and taught 3 captains how to use software such as Phoenix Tuner, FRC Driver Station and other NI Game Tools software
- Worked on 15-second autonomous phase routines where robot performed integral game actions on its own
- Drove robot at Western and Windsor Essex Great Lakes season events
- Performed 20+ routine robot inspections after matches and lead pit crew to perform necessary repairs/changes
- Progressed to semi-final matches at Windsor event, eliminating over 15 teams
- Taught Java and robotics programming to 8 junior members

## PROJECTS

### Modelling *Monopoly* with Markov Chains | *Python, NumPy, pandas, VS Code*

Jan. 2023

- Optimized popular financial board game *Monopoly* using Markov Chains and matrices
- Implemented the 40x40 game board as a 2D array
- Used mathematical concepts such as identity matrices and matrix multiplication to easily manipulate the array
- Used NumPy and pandas libraries to work with the large matrices
- Simulated 1000 1000-step board traversals to find most visited squares on the board using hand-written algorithm

### EvLav Detection | *Python, Django, Git, OpenCV, Tesseract OCR, PySimilar, Bootstrap*

Jun. 2021

- Developed plagiarism detection app in the Hack3 hackathon, won "Best Education hack"
- Used Tesseract OCR to convert handwritten text into digital text
- Used PySimilar and OpenCV to compare two pieces of text and return a plagiarism percentage score

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, Python, C++, Java

**Frameworks:** React, Next.js, Prisma, Django

**Developer Tools:** Git, Docker, VS Code, Office Suite

**Libraries:** pandas, NumPy, Chakra-UI, Redux