# Roozbeh Ali

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## Education

**University of Waterloo** Sept. 2023 – Jun. 2028
*BASc, Honors Computer Engineering* *Waterloo, ON*

## Experience

**Beavr Labs** | ***TypeScript, React, Redux, Git, Chakra-UI, Prisma*** Jul. 2022 – Dec. 2022
*Front end developer* *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, WPILib*** Sept. 2022 – Jul. 2023
*Programming Captain and Driver* *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, PyTorch, 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, HTML, CSS
**Frameworks**: React, Next.js, Prisma, Django
**Developer Tools**: Git, Docker, VS Code, Office Suite
**Libraries**: pandas, NumPy, Chakra-UI, Redux