Aditya Patel

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EDUCATION

University Of Windsor   Sep. 2023 – June 2027
Bachelor of Computer Science, Honors Co-op   *Windsor, ON*
- Relevant Coursework: Linear Algebra, Calculus, Discrete Math, Intro to Algorithms and Programming

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, HTML, CSS, C#, Lua
Developer Tools: Git, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Unity
Libraries: pandas, NumPy, Matplotlib, Keras, TKinter, Swing, WPILib

RELEVANT EXTRACURRICULARS

Programming Lead   Nov. 2021 - June 2023
FIRST Robotics Team 4903 @ Vincent Massey Secondary School   *Windsor, ON*
- Contributed about **25%** in programming our own swerve drive library and **30%** in a custom driver dashboard
- Worked on tuning PID values, bringing our robot's capability from **3-4** pieces to **8-9** pieces a game
- Developed multiple autonomous routines each season
- Connected with and assist 2 other local teams in getting their robot up and running
- Documented our existing programming knowledge in 20 pages for future team members to use after we graduate

PROJECTS

AI Prediction Models | *Python, pandas, matplotlib, numpy*
- Developed multiple prediction models using popular practice datasets
- Learned about data analysis and cleaning using pandas and numpy
- Learned about data visualization such as bar graphs and statistics to gain better understanding of each dataset
- Learned about which model to use in different scenarios, such as linear and logistic regression, decision trees, random forest, classification models, etc.

Chess AI | *Java, Swing, Github*
- Developed a chess game with Java's Swing framework
- Created an AI that used algorithms such as min-max, alpha-beta pruning, and a few basic hard-coded moves
- Created visual elements such as game pieces and UI/UX
- Used Github to collaborate with partner

Asteroids | *Java, Swing, Github*
- Developed a recreation of the arcade game Asteroids
- Used multiple physics concepts to simulate a more realistic experience
- Implemented an enemy AI using a randomizer and basic math concepts
- Animated death effects and asteroid splits

Discord Bot | *Javascript, Typescript, Node.js, Discord.js*
- Developed a discord bot with 50+ commands in categories such as moderation (kick, ban, mute), economy (cash, buy, sell), utility and entertainment
- Gained experience in working with multi-file projects
- Learned about API usage, such as Reddit and Discords API

Remora | *Python*
- Developed a basic interpreted loosely typed language in python that resembles python with small personal twists in syntax
- Learned about the inner workings of interpreted languages, such as lexing, parsing, interpreting and executing
- Basic functionality such as math operations and variables