

# Harsh Patel

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## Education

**Illinois Wesleyan University**, Bloomington, IL  
Bachelor of Science, May 2025  
Major: Computer Science

Cumulative GPA: 3.28/4.0

## Skills

**Technical Skills:** Git/Github, Java, JavaScript, C++, Python, Rust, SQL, HTML, CSS, Scheme, OCaml

## Projects (Github Link- <https://github.com/Harsh-Patel1>)

### Full-Stack Workout Application June 2024

- Engineered a workout application with a small team, leveraging AI to customize workout plans based on user fitness goals (e.g., lifting-based goals).
- Implemented with React, Tailwind CSS, Flask, and PostgreSQL, using an AGILE methodology
- Implemented video tutorial integration for exercises, providing users with visual guidance to ensure proper workout form.

### Checkers AI Development April 2024

- Developed an AI for playing Checkers using Python and PyTorch, leveraging Reinforcement Learning with Q-learning to enable the AI to learn optimal strategies through self-play.
- Engineered the game environment, and trained the AI model with over 1,000 game iterations, achieving a significant improvement in the AI's decision-making accuracy and win rate over time.

### Concert Finder December 2023

- Worked with a team to build Concert/Performance finder for Illinois Wesleyan's School of Music.
- Used tools such as Flask, Git, HTML, CSS and worked with front/backend development.

### Scheme like Interpreter(OCaml & Python) September 2023

- Fully functional programming language interpreter modeled after the programming language Scheme

### HVAC Project February 2022

- Designed a software control system for an HVAC system in C++; implemented classes and objects

## Employment Experience

### Web Editor | IWU Mathematics Department, Bloomington, IL August 2023 - Present

- Manage the IWU Mathematics website, editing and making changes to the website to create a smooth user experience.

### Customer Associate | Subway, Schiller Park, IL June 2022 - Present

- Oversee register and cash deposits, and learn how to problem-solve with a team effectively.

### Barista | Dunkin', Bensenville, IL June 2020 - August 2021

## Related Coursework

### Deep Learning (Spring 2024)

- Study of mathematical foundations, implementation of neural network optimization in Python, and a number of applications of deep learning including machine vision and natural language processing.

### Programming Languages (Fall 2023)

- Advanced study of programming languages, emphasizing comparative analysis, object-oriented and functional programming, and resource management; reviewed parsing, type systems, and semantics

### Software Development (Fall 2023)

- In-depth study of the software development process, from planning and UI design to coding, testing, and maintenance; includes training in technical writing and client communication

### Algorithm and Design Analysis(Spring 2023)

- Java, algorithms and data structures; common patterns, recursion, and divide and conquer; advanced data structures, abstract data models, linked structures, array-based structures, and hash tables

## Campus Involvement

### AI Club (Position- Secretary)

### International Collegiate Programming Competition

