

# Het Patel

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## Education

The State University at New York at Buffalo

August 2023 – May 2027

BS in Computer Science

- **Minor:** Statistics
- **GPA:** 4.0/4.0
- **Coursework:** Operating Systems, Machine Learning, Computer Organization, Systems Programming, Data Structures, Algorithms, Regression, Probability

## Technologies

**Languages:** C, Java, Python, JavaScript, HTML, CSS

**Frameworks:** React, Vite, Tailwind, Numpy, Pandas, JUnit, MicroPython

**Tools:** Git, npm, Webpack, Minitab

**Environments:** Linux, Windows, Node.js

## Projects

**IPOPT (Research)**

[github.com/HP-002/slip\\_ipopt](https://github.com/HP-002/slip_ipopt) 

**Tools:** C, IPOPT, Mathematica, Python

- Programmed Interior Point Non-linear Optimizer for a Spring Loaded Inverted Pendulums (SLIP) robot.

**Tenzies Game**

[github.com/HP-002/tenzies](https://github.com/HP-002/tenzies) 

**Tools:** React, Vite, CSS

[Live Demo](#) 

- Tenzies is a fun and interactive dice game built using React and Vite.
- Implemented stateful game logic, real-time UI updates, and win detection with celebratory confetti animation while focusing on clean component architecture, responsive design, and engaging user experience.

**Cellular Automaton Simulator**

[github.com/HP-002/alices-game-of-life](https://github.com/HP-002/alices-game-of-life) 

**Tools:** C++, Arduino Uno R4, NPN Transistors

- Developed a Cellular Automaton Simulator following Conway's fundamental rules along with randomization.
- Programmed Arduino Uno R4 Microcontroller in C++ to stimulate generations in a 2-D grid. Designed and integrated a logic circuit using NPN Transistors and diodes to process states following Conway's rules.


## Experience

**Peer-Assisted Learning (PAL) Leader**

Buffalo, NY

*Tutoring & Academic Support Services*

Feb 2024 - Present

- Facilitate collaborative review sessions that reinforce core concepts in Statistical Methods through peer-led learning, problem-solving, and exam-focused strategies.
- Designed and maintain a JavaScript-based resource website ([PAL Webpage](#) ) to centralize study materials, practice problems, and session content for student access outside the classroom.
- Coordinate with faculty by attending lectures and aligning session content with course goals to ensure academic support is relevant and effective.

**Math Place Tutor**

Buffalo, NY

*Thomas J. Edwards Undergraduate Learning Center*

Feb 2024 - Present

- Provide tutoring support in Algebra, Precalculus, Business Math, and Calculus I & II, tailoring assistance to individual student needs.
- Help students develop a deeper understanding of course material while facilitating active learning habits and independent problem-solving skills.

**Summer Bridge Program Teaching Assistant**

Buffalo, NY

*UB Arthur O. Eve Educational Opportunity Program*

Summer 2024

- Collaborated with the professor to facilitate classes, including grading assignments, quizzes, and providing instructional support while also monitoring class performance and provide personalized support.
- Led class recitations and offered tailored support to help students master course concepts, complete assignments, and strengthen their understanding through targeted practice and review.