

Roshan Hegde

 github.com/RoshanAH  rhegde@illinois.edu  (952) 594-4175

EDUCATION

University of Illinois at Urbana-Champaign

May 2026

B.S. in Computer Science, Grainger College of Engineering

GPA: 4.0/4.0

Highland Park High School

May 2023

GPA: 4.69/4.0

RELEVANT COURSEWORK

Courses: Intro to Algorithms and Models of Computation, Cryptography, Computer Architecture, Numerical Methods, Data Structures (Honors), Intro to Probability and Statistics for Computer Science, Linear Algebra with Computational Applications, Fundamental Mathematics, Discrete Structures

Northwestern University Courses: Java, C++, Machine Learning

SKILLS

Languages: C/C++, Java, Kotlin, Python, Lua, Rust, Javascript/Typescript, HTML/CSS

Tools: Git/GitHub, Docker, Linux, Nix, Vim

Frameworks: Svelte, ReactJS, Tailwindcss, Vite

Libraries: numpy, pytorch, pandas, matplotlib

PROJECTS

nix-tinker | *Rust, Cargo, Nix, Nix Flakes*

May 2024 – Present

- Open source developer tool that allows for rapid prototyping of configuration files
- Ensured reproducibility on any machine with the use of nix flakes

RecursiveTicTacToeML | *Rust, Cargo, Nix, Git*

June 2022 – Present

- Implemented a recursive variation of tic-tac-toe descending to the nth dimension
- Trained a self playing network on recursive tic-tac-toe with gradient descent and backpropagation derived from scratch
- Websocket-based fully functional multiplayer mode with game state validation

hello_lang | *Rust, Cargo, Git*

February 2024

- 1st place in the 48 hour HackIllinois 2024 hackathon
- Designed a modular software architecture in Rust that allows for suckless configuration and fast implementation of new languages

cookies | *Java, Git*

September 2023

- 1st place in the 24 hour MechMania 29 hackathon
- Developed an AI model with a custom heuristic that competed with other participants' models in a simulated turn-based environment
- Enrolled solo against teams of 4, undergraduates and graduates

EXPERIENCE

Opensource@Illinois | *Member*

August 2024 – Present

Open source development @ UIUC

SIGpwny | *Member*

August 2023 – Present

ACM cybersecurity division @ UIUC

FTC (First Tech Challenge) | *Lead Programmer all 7 years*

September 2017 – May 2023

Designed multiple iterations of robot software architecture as well as computational projects like computer vision and motion profiling. Qualified and competed at state level championship 5 times