

# Aditya Saini

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## EDUCATION

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### Purdue University

*B.S. in Computer Science and Mathematics*

West Lafayette, IN

*Expected May 2029*

- **Concentrations::** Machine Intelligence, Systems Programming
- **Coursework:** Data Structures & Algorithms, Systems Programming, Linear Algebra, Multivariable Calculus, Physics (Mechanics & E&M), Object-Oriented Programming, Discrete Math, Probability

## EXPERIENCE & PROJECTS

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### Inverse Kinematics Calculator

*Creator & Software Engineer*

Remote

*July 2025 – Present*

- Designed and implemented a forward and inverse kinematics calculator in C.
- Added visual simulation support with animation through OpenGL, utilizing GLAD and GLFW.

### Natural Language Shell (NLSH)

*Creator & Software Engineer*

Remote

*July 2025 – Present*

- Implemented a lightweight command-line shell in C that executes natural language commands.
- Built tokenizer, basic intent parsing, and bash command mapping for user-friendly interaction.
- Developed cross-platform installation tooling with `setup.sh`; documented architecture on GitHub.
- Exploring integration with DeepSeek R1 / OpenAI's API to support more complex queries.

### Personal Website / Portfolio

*Developer & Designer*

Remote

*June 2025 – Present*

- Designed and developed a portfolio website using HTML, CSS, and JavaScript to showcase projects.
- Implemented responsive design for cross-device compatibility and performance.
- Deployed the site using Surge for fast static hosting with a custom domain.

### FIRST Robotics Competition Team 2554

*Build President & Programming Captain*

Edison, NJ

*Sep 2021 – June 2025*

- Mentored new programmers and coordinated between mechanical, electrical, and software subteams.
- Led software development for autonomous systems, achieving top scoring routine at Districts.
- Translated software requirements into actionable hardware solutions.

## INVOLVEMENT

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**Hindi USA Volunteer Teacher:** Taught conversational Hindi and grammar through interactive games and activities; fostered a supportive learning environment.

**Kumon Math Instructor:** Instructed advanced math (Pre-Algebra to Calculus 2) to K–12 students, building logical reasoning and strong foundations.

## SKILLS

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**Languages:** C, C++, Python, Java, JavaScript, Bash, HTML/CSS, LaTeX

**Technologies:** Git, OpenCV, React, Node.js, Flask, SQL, Arduino, Linux, VS Code

**AI Tools:** Claude, Cursor, Copilot, Gemini CLI, ChatGPT