Aditya Saini

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(908) 912-6974 — U.S. Citizen

Education

Purdue University — West Lafayette, IN
B.S. in Computer Science and Mathematics — *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

Inverse Kinematics Calculator — Remote
Creator & Software Engineer — *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) — Remote
Creator & Software Engineer — *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 — Edison, NJ
Developer & Designer — *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.

Custom Controller — Edison, NJ
Programmer & Designer — *October 2024 – April 2025*

- Engineered a custom gamepad controller using a PSoC (Programmable System on a Chip), repurposed for use in FRC robotics applications.
- Wrote low-level firmware in C to handle input polling, and USB communication for robust, realtime performance
- Repurposed and integrated the controller with our robotics team's driver station, providing dedicated control, resulted in operator clarity and reliability during competition.

Skills

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

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

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