John Flanagan

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EDUCATION

University of Notre Dame ▪ Notre Dame, IN   Expected May 2025
Bachelor of Science in Computer Science, Mathematics   GPA: 3.77/4.00

Notre Dame London Global Gateway ▪ London, UK   Jun 2022 - Aug 2022
- Participated in a six-week engineering study abroad program through Notre Dame's London Global Gateway.

TECHNICAL SKILLS

- **Languages:** Python, C, C++, HTML, CSS, Java, JavaScript, TypeScript, R, Bash, MATLAB, Mathematica, Verilog, SQL
- **Web & Frameworks:** React, Angular, Node.js, Express, Django, Spring Boot, Flask, Next.js, GraphQL, Postman
- **DevOps, Cloud & Tools:** AWS, GCP, Azure, Docker, Kubernetes, Git, Jenkins, PCF, Firebase, Heroku, Linux, LaTeX

EXPERIENCE

Software Engineering Intern ▪ Remote   May 2023 - August 2023
Ford Motor Company
- Full-stack Software Intern contributing to development of the Dealer Information System (DIS) online application.
- Constructed responsive, user-friendly interfaces with Angular. Built and configured robust APIs using Spring Boot. Optimized CI/CD pipelines with Jenkins. Employed Agile and test-driven methodologies for efficient development.

Teaching Assistant ▪ Notre Dame, IN   August 2023 - Present
- Offered weekly office hours and graded student assignments for Notre Dame's Theory of Computing course.

Undergraduate Research ▪ Notre Dame, IN   August 2023 - Present
- Conducted AI research with Miang Jiang, utilizing large language models to drive cybersecurity advancements.

COMPETITIONS

Hack For Good ▪ Notre Dame, IN   April 2023
- Captured first place in Hackathon competition with an innovative online application aiding Ukrainian refugees.
- Used React frontend, Next.js backend, and AI for real-time location-based access to resources, including live translation.

DataFest ▪ Notre Dame, IN   March 2023
- Earned top honors in the "Best Visualization" category by analyzing American Bar Association data on free legal services.
- Leveraged Python and R, implementing statistical methods and natural language processing (NLP) to create compelling visuals that highlighted trends and patterns.

PROJECTS

AI Blog Generation Website | Github   June 2023 - July 2023
- Developed an AI-powered blog generation website using React, Tailwind CSS, Next.js, and MongoDB.
- Enabled secure content creation from YouTube videos, uploaded media, or curated prompts with user authentication.

Group Spotify Application | Github   May 2023
- Created a mobile-first collaborative music listening platform with React and Django.
- Implemented live group Spotify listening sessions, granting the host administrative control over music selection.

Web Scraping Class Search Tool | Github   April 2023
- Built a Python and Selenium web scraping tool for extracting course data from Notre Dame's Class Search website.
- Provided students the ability to track specific classes and receive email notifications for status updates.