

Navraj Singh

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EDUCATION

University of Virginia

Bachelor of Science in Computer Science

Charlottesville, VA

Aug. 2023 – Present

EXPERIENCE

Undergraduate Research Assistant

University of Virginia

January 2025 – Present

Charlottesville, VA

- Implemented Perturbation Sensitivity Analysis to detect biases in models across social groups and institutions.
- Analyzed model outputs to uncover bias patterns in sentiment and toxicity classifications.
- Proposed bias mitigation strategies to improve fairness in text classification models.

Software Engineering Fellow

Headstarter AI

Jun. 2024 – Aug. 2024

Queens, NY

- Built and deployed 5+ AI apps with NextJS, OpenAI, and Stripe, achieving 98 percent accuracy.
- Led a team of 4 fellows through Agile workflows, emphasizing MVC patterns and CI/CD best practices.
- Coached by Amazon, Bloomberg and Capital One engineers on Agile, CI/CD, Git and micro-service patterns.

AI Training Advanced Coder

Outlier AI

May 2024 – Dec. 2024

Queens, NY

- Conducted 150+ detailed reports on AI models, achieving 95% accuracy in coding tasks across 150+ test cases.
- Tested AI models' capabilities in linear algebra, probability and code generation to ensure precise analytic skills.
- Implemented 100+ Python-based test methods to verify the efficiency and accuracy of AI-generated code.

Full Stack Developer

Odin Project

May 2024 – Jul. 2024

Queens, NY

- Gained proficiency in web development tools: Text Editors, Command Line, Flexbox, and DOM manipulation
- Developed interactive webpages using HTML, CSS, and JavaScript, showcasing front end development skills
- Utilized Git for version control, Node.js for JavaScript runtime environment, and dev. tools for efficient coding.

PROJECTS

AI Flashcards | Python, Java, Stripe, Next.js, React, Firebase, Clerk, Pinecone

Aug. 2024 – Sep. 2024

- Built an AI-powered flashcard app using OpenAI API for content generation and Stripe for payment.
- Reached 500+ users with 90% satisfaction while utilizing marketing strategies
- Enhanced skills in API integration, automated content creation, and e-commerce functionalities

AI Rate My Professor | Python, JavaScript, Next.js, OpenAI API, Pinecone

May 2018 – May 2020

- Designed an AI assistant for rating professors using RAG to gather and retrieve data based on 100+ data points.
- Utilized a vector database allowing fast retrieval of similar items and scalability for real world use.
- Strengthened skills in AI-powered recommendations and data-driven UX design

PROFESSIONAL GROWTH

Supervising Tutor

Princeton Review's Tutor.com

January 2024 – Present

Queens, NY

- Provided expert tutoring in CS and mathematics to over 200+ students, enhancing communication skills.
- Guided students to master topics and develop problem-solving skills in a productive learning environment.

TECHNICAL SKILLS

Languages: Java, Python, C, SQL (Postgres), JavaScript, HTML/CSS

Frameworks: React, Node.js, NumPy, JUnit, Material-UI, OpenAI API, Next.js

Developer Tools: Git, Docker, Google Suite, VS Code, Visual Studio, PyCharm, IntelliJ, Jupyter Notebook, Pinecone, Firebase, AutoCAD

Libraries: pandas, NumPy, Matplotlib