

Manu Deva

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EDUCATION

Northwestern University

B.S. in Computer Science, Minor in Economics

Evanston, IL

Expected June 2025

- **GPA:** 3.41/4.00
- **Coursework:** Databases, Algorithmic Analysis, Machine Learning, Scalable Architectures, Distributed Systems

EXPERIENCE

Data Science Intern

Jun 2024 - Present

SONIC Research Group

Evanston, IL

- Develop a **custom multi-label sentiment analysis classifier** by fine-tuning a RoBERTa model using **Hugging Face** and **PyTorch**, achieving **85-99% accuracy** across 5 labels for analyzing human-AI team interactions.
- Address key challenges in sentiment analysis, including context understanding and sarcasm detection, **improving classification accuracy** by **10-15%** in preliminary tests.
- Analyze and annotate **29,000 transcribed human-AI conversational messages** to construct a robust training dataset and support research of Relational Event Model (REM)-backed social networks.

Research Assistant

Apr 2024 - Present

Global Poverty Research Lab, Northwestern Kellogg

Evanston, IL

- Modify and verify **22,000** Indian surname pairs in Excel generated with a Python fuzzy name-matching algorithm to understand the effect of economic shocks on the political and electoral success of Indian caste groups.
- Enhance a Levenshtein distance algorithm to capture **70,000+ observations** of state-level political candidates.

Chief Technology Officer

Oct 2022 - May 2024

Student Holdings

Evanston, IL

- Monitored a **\$5,000** annual software budget, achieved quarterly KPIs, and maintained client relations through meetings and recruitment to align **business intelligence and strategy** with technological development.
- Managed development of an interactive, client-side **React application with Firebase backend** for **40+** students in a portfolio of 4 student-run businesses to generate **\$100,000+** in annual revenue.

App Developer

Apr 2023 - Sep 2023

Origin Robots Company

Chicago, IL

- Built a multiplatform **Electron and React** desktop application prototyped in **Figma**, implementing **serial communication** for precise control and real-time device interaction with custom PCBs in TPU prostheses.
- Maintained company website and product documentation to connect with **10+ investors and researchers**, secure **\$5,000+** in funding with an NSF research proposal, and contribute to brand amplification.

PROJECTS

SuggestMe | *Next.js, JavaScript, AWS, Tailwind*

Aug 2024 - Present

- Developing a **full-stack** music and event recommendation platform leveraging the Spotify, Ticketmaster, and OpenWeatherMap APIs to allow **OAuth**, personalized concert discovery, and location-based playlist creation.
- Designed the frontend using **React** and **Tailwind CSS** with **Redux** for persistent state and authentication management, and deployed an automated backend infrastructure utilizing the **Serverless Framework** with **AWS Lambda** and API Gateway to manage **RESTful API** endpoints.

PAM | *Python, SQLite3, Flask, AWS*

Oct 2023 - Apr 2024

- Architected a **large language model** to act as a realistic virtual receptionist for Northwestern's Computer Science department, streamlining access to information on **60+** professors and events, and reducing query time by **40%**.
- Created an **event-driven conversational retrieval pipeline** enabling language recognition by integrating OpenAI's LLM with **Hugging Face** and an **SQLite3** database, deployed with **Flask** on **EC2**.

TECHNICAL SKILLS

Languages: Python, JavaScript, C++, C, R, SQL, Java, HTML, CSS, TypeScript, C#, Scala, Racket, MATLAB
Frameworks/Libraries: React, Node.js, Agile, REST APIs, Next.js, Express, PyTorch, Flask, NumPy, Pandas
Developer Tools: Git, AWS (Lambda, S3, RDS, EC2), Bootstrap, Linux, Excel, Figma, Canva, Tableau