Harsh Maheshwari

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EDUCATION

Pennsylvania State University *State College, PA*
BS in Computer Science and BS in Mathematics *August 2022 – May 2026*
GPA: 3.8/4.0

EXPERIENCE

Software Engineering Intern *State College, PA*
Penn State College of Medicine *May 2024 – Present*
- Directed the development of a cross-platform mobile application for managing pediatric and adult heart disease, **built with React Native** and **JavaScript**, leveraging **Firebase** for real-time data synchronization and streamlining patient record access for 500+ users.
- Collaborated in an agile **team of 5**, successfully delivering the app to the university by the deadline.
- Conducted extensive beta testing with **20+** users to ensure the app's functionality and user experience.

Research Intern *State College, PA*
College of Information Science and Technology *April 2024 – Present*
- Publishing a research paper as the lead author on the bias by LLM's on **20+** stereotypical subjects by Llama 2 7B using graphs.
- Developed **Python** scripts and **Jupyter** notebooks to automate data collection, leveraging **Flask API** to retrieve model responses from various **LLM models** on **Hugging face**

Chief Technical Officer *State College, PA*
Marble *September 2023 – Present*
- Led the development and launch of an AI-driven mental health platform, managing technical teams with Agile and Scrum methodologies, and achieved **50+ downloads** in the first week on the App Store.
- Secured **$7,500** in awards and engaged with over **300** potential users to tailor product features.
- Spearheaded a website using **Node.js, Next.js, React,** and **TypeScript**, leading a team of 4 members, delivering the MVP in under one month
- Built **REST API** endpoints using **Flask** to connect with **AWS**, **Firebase**, **OpenAI** and **Eleven Labs** calls for data retrieval, enabling generative AI–powered insights and AI-powered voice calling in real time.

Software Engineering Intern *State College, PA*
World Hope *January 2024 – April 2024*
- Delivered the application to be launched to over **1,000** social workers in supporting **100,000+** child abuse victims.
- Architected and deployed a **Python-based RAG** (Retrieval-Augmented Generation) backend, leveraging **MongoDB** for rapid data retrieval and seamless AI query execution—scaling to support 1,000+ social workers.

PROJECTS

Nebula| *Flask, html, CSS, JS, CNN, vtk, Numpy, Tensorflow* *October 2023*
- Achieved an accuracy of **94%** and **80%** for CNN models detecting brain tumors and Alzheimer's.
- Utilized **300+ DICOM** files(CT Scans) to develop an algorithm for a 3D model of the brain
- Rewarded with 1st place amongst 300 people in the category for usage of Generative AI.

CNN Models for Image Classification | *Numpy, Tensorflow, Matplotlib, CNN* *July 2023*
- Developed **4 image** classification **CNN models** to identify and differentiate between vehicles, animals, flowers, fruits and vegetables with accuracy ranging from **85% to 95%**

Signease | *Numpy, Matplotlib, NPM, TensorFlow, skLearn's Random Forest Identifier* *March 2023*
- Collaborated with a team of five to design and create a real-time ASL Translator app with an accuracy of **87%**, delivering **third-place** success in a competitive Hack PSU event.

SKILLS

Languages: Java, Python, MySQL, HTML/CSS, JavaScript, Dart, Kotlin, TypeScript, C, C++, R, Racket, Bash, Verilog
Technologies: TensorFlow, Flask, Flutter, MongoDB, React, Git, NumPy, CNN, Pandas, AWS, NLP, Microsoft Azure, Firebase, Django, Linux, Node.js, Next.js
Awards: President Walker Award, President Sparks Award