Shripad Akumalla

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EDUCATION

Purdue University, West Lafayette, IN
B.S. in Computer Science | Mathematics Minor — May 2026

RELEVANT EXPERIENCE

Radical AI | *AI Engineer Intern & Software Development Intern* — June 2024 - August 2024

- Created a Streamlit chat interface integrating Google's advanced language model, **Gemini**, for an accessible exploration of large language model applications.

Howmet Aerospace | *Intern*, via Purdue Data Mine — August 2023 - May 2024

- Developed a **Convolutional Neural Network** utilizing **ResNet** architecture to differentiate between normal and defective turbine vanes for aircraft safety.
- Conducted performance analysis of the model, utilizing **AUC and ROC curves** to assess its efficiency.
- Developed a high-accuracy model (94%) with minimal false negatives by artificially generating more images and training the model with more concentrated data.

Science Internship Program | *Behavior Modeling with Reinforcement Learning Intern*, UCSC — June 2022 - August 2022

- Developed a predictive model for pedestrian behavior tailored to self-driving vehicles.
- Applied **Reinforcement Learning** techniques for algorithm training, specifically **Monte Carlo** methods to obtain numerical results through random sampling.
- Implemented iterative improvements to enhance its accuracy and reliability in real-world scenarios.

Research Intern, University of California at Riverside, Riverside, CA — February 2022 - August 2022

- Worked with Prof. Gupta and a PhD student to build a dynamic slicer aimed at facilitating debugging processes.
- Used **bytecode instrumentation** to debug programs without adding modifications to the source code.
- Utilized specialized packages such as "**equip**" to configure the dynamic slicing tool.

PROJECTS

Sweep, Catapult Hacks at Purdue — April 2024

- Developed "a platform to visualize manufacturing data, reduce scrap, and optimize machine configurations.
- Identified a $8 trillion issue in manufacturing waste and led a team to create a solution using Streamlit, **dora AI**, OpenAI API (GPT 3.5 Turbo), and statistical methods.

Speech Simplified, Boilermake XI Hackathon at Purdue — January 2024

- Used **Python**, **Streamlit**, **Streamlit Cloud**, **OpenAI API**, and various OpenAI models to create an application that can grade speeches.
- Takes in an audio file, and an image of the rubric, and provides accurate suggestions, with a rewritten version.
- Awarded **Best Cloud Implementation**, sponsored by **Caterpillar Inc.**

Helmet Detection, Contra Costa Science and Engineering Fair — March 2022

- Built a model that identifies whether a motorcyclist is wearing a helmet using **Tensorflow** and **OpenCV**.
- Created my own data sets of thousands of images for labeling, training, and testing purposes.
- Won 3rd place among many other projects by creating a thorough demonstration and presentation.

SKILLS

- **Programming:** Python, R, SQL, Java, C, HTML & CSS, JavaScript
- **Technologies:** Machine Learning, Computer Vision, Cloud Technologies, GitHub, OpenAI, Gemini
- **Tools / Frameworks:** TensorFlow, OpenCV, Streamlit, Docker, ReactJS
- **Certifications:** AWS Cloud Practitioner
- **Qualities:** Teamwork, Meeting Deadlines, Flexibility, Problem Solving, Taking Initiative, Integrity, Creativity
- **Coursework:** OOP in Java, Data Structures and Algorithms, Computer Architecture, Programming in C