AKHIL SAGARAN KASTURI

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EDUCATION

Purdue University, West Lafayette, IN **Dec 2026**
- Master of Science in Computer Science specializing in Machine Intelligence and Security

Purdue University, West Lafayette, IN **Dec 2025**
- Bachelor of Science in Computer Science Honors and Applied Statistics (Minor: Mathematics) specializing in Machine Learning
- CGPA: 3.80/4.0
- Recipient of Dean's List and Semester Honors (Fall '22, Spring '23, Fall '23, Spring '24, Fall '24, Spring '25)

WORK EXPERIENCE

Undergraduate Research Assistant, Purdue University, West Lafayette, IN **May 2025 - Present**
- Supporting a clinical AI research project focused on automating triage recommendations for HIV patients using LLMs, with the long-term goal of scalable, safe decision support in under-resourced care settings.
- Benchmarking state-of-the-art language models (LLaMA 3.3, DeepSeek R1, etc.) on real clinical data, assessing their accuracy and reasoning alignment against expert-labeled outcomes.
- Building infrastructure for model safety and improvement, including human-in-the-loop correction pipelines and strategies to optimize recall (sensitivity) in triage recommendations.

Software Development Intern, CGI, Westerville, OH **Jun 2024 – Aug 2024**
- Developed and implemented new features for an internal member forecasting and progress monitoring application for NiSource using .NET technologies (C#, React) and MySQL.
- Collaborated with .NET developers to provide patch fixes and enhance application performance.
- Researched and developed AI models, including a chatbot and a multi-variable time-series model, using Python, C#, and Azure's AI and ML Studios (AI Bot Service, AI Language, AutoML) to improve member forecasting and time planning.

Resident Assistant, Purdue University Residences, West Lafayette, IN **Aug 2024 – Present**
- Employed an annual shared budget of $96,000 to coordinate unique events promoting diversity, mental health, financial wellbeing, and career growth.
- Maintained personal relationships and conducted quarterly checkups to foster a safe, healthy, and engaged community of 50+ students from 20+ states and 5 countries.
- Provided on-call response to concerns a resident, co-worker or supervisor had regarding the residence hall environment.

Undergraduate Student Researcher, Purdue University, West Lafayette, IN **Jan 2024 – Dec 2024**
- Collaborated with a team to develop and train an RNN-T model for child speech transcription, enhancing the model pipeline and assisting with data visualizations and analysis.
- Worked with PhD students to develop generative AI models that helps generate dance sequences from lead videos and textual prompts specifying dance styles and steps, and a diffusion-based model for multi-agent path planning.

Undergraduate Teaching Assistant, Purdue University, West Lafayette, IN **Jan 2024 – Present**
- Supported 800+ students by conducting weekly labs and office hours, addressing course concepts and project queries, and providing guidance on coding standards.
- Enhanced student engagement on EdStem communication portal by promptly responding to inquiries and maintain clear communication on project deadlines.
- Assisted in course development by facilitating quiz logistics, grading, and contributing to the creation and testing of all student assignments.

Python Instructor, Wonderland Education Inc., West Lafayette, IN **Mar 2024 – Present**
- Instructed 5th grade students python programming fundamentals and advanced python programming
- Developed and implemented engaging curriculum modules tailored to the skill level and interested of the children, fostering a supportive and interactive learning environment
- Provided personalized guidance and feedback to students, encouraging their creativity and problem-solving abilities

PERSONAL PROJECTS

- **NLP Linter (2025):** Designing and implementing a Python-based NLP-powered linter to enforce coding standards in C programs for Purdue's CS 240 course. Leveraging Tree-sitter for AST parsing, a custom BILEU tokenizer, and fine-tuning CodeBERT for analysis.
- **HireHack (2024):** Developed a Chrome extension that provides real-time interview feedback using facial emotion recognition, speech, and lexical analysis. Integrated a feed-forward neural network to generate live improvement suggestions.
- **UniLens (2023):** Built a web application to assist users in college research, offering personalized college lists, profile building, and essay refinement. Utilized ReactJS, NodeJS, GPT API, and MongoDB, incorporating a Weighted K-Means Clustering algorithm.
- **Diabetic Retinopathy Analyser (2021):** Created a CNN model with Keras and TensorFlow to predict retinopathy grade and macular edema risk from retinal scans, achieving 92% accuracy.

LANGUAGES: Python, Java, C, C++, C#, JavaScript, SQL, Shell, R
FRAMEWORKS: .NET, NodeJS, ReactJS, MySQL, MongoDB, Web Dev (HTML, CSS, jQuery), Git
TRAINING & CERTIFICATIONS: Azure AI Fundamentals, Azure AI Associate Engineer, Google:Introduction to Generative AI