GONA HEMANTH DURGA RAO

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OBJECTIVE:

As a motivated Computer Science Engineering student with a focus on Artificial Intelligence and Machine Learning, I am eager to leverage my academic knowledge to tackle complex, real-world problems. I am driven to sharpen my technical expertise, dive into cutting-edge AI and ML techniques, and actively contribute to impactful projects. With a strong commitment to lifelong learning and innovation, I aim to build a career that pushes the boundaries of technology and drives progress in AI and Machine Learning.

EDUCATION:

- B.E in Computer Science and Engineering with specialization AIML (2022-2026), Sathyabama institute of science and technology, Chennai, India (Current:8.83 CGPA)

PROJECTS:

1. **Lane Line Detection:**
   Developed a robust lane line detection system using computer vision techniques to identify and track lanemarkings in real-time from video feeds. This system was designed for automotive applications, with the goal of assisting autonomous or driver-assistive vehicles in understanding the road layout.

2. **Gesture Based Mouse Control:**
   Developed an intuitive hand gesture-based cursor control system that allows users to interact with computers by detecting and interpreting hand movements. This system uses computer vision and machine learning techniques to capture real-time hand gestures through a webcam, enabling seamless control of the mouse pointer without the need for physical input devices such as a mouse .

3. **Multimodal AI Translator and Visualizer:**
   Developed an AI-powered pipeline that translates input text from any language to English, generates a representative image using the translated content, and produces a descriptive caption based on the generated image. Integrated natural language processing (Fairseq), image generation (Stable Diffusion), and vision-language models (BLIP/BART) to create a seamless multimodal experience.

4. **SmartCognition: AI Cognitive Rehabilitation:**
   Developed an AI-based cognitive rehabilitation and forecasting system using Python, Machine Learning, and SQL. Adaptive memory games collect performance metrics (accuracy, response time, errors), which are analyzed using ML models to predict cognitive trends (MMSE-aligned). Built a therapist dashboard for automated reporting and remote patient monitoring.

SKILLS:

Languages	: C, Python, Java, SQL.
Developer Tools	: VS Code, PyCharm, Jupyter Notebook, Google Colab.
Technologies/Frameworks	: GitHub, Tensorflow, PyTorch.

CERTIFICATIONS:

- Mathlab,MathWorks,2023
- Gen AI Internship, Neubaltics,2024
- AWS Internship,Vectra technosoft,2025