Sai Srirama Saran Konala

Department of Artificial Intelligence
Indian Institute of Technology Hyderabad
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EDUCATION

Year	Degree/Certificate	Institute	Grade/%
2027	B.Tech.	Indian Institute of Technology, Hyderabad	9.08/10
2023	Class XII (APBIE)	Sri Chaitanya Junior College	97.6%
2020	Class X (ICSE)	Paramjyoti School	94%

SCHOLASTIC ACHIEVEMENTS

Secured **All India Rank 875** in **JEE Advanced** among 1,80,000 candidates. *2023*
Secured **All India Rank 1166** in **JEE Mains**, among 16,00,000 candidates. *2023*
Recieved **the Academic Excellence Award** for achieving one of the **highest CGPA**s in my department. *2024*
Achieved **AIR 255** in **AP EAMCET** and **AIR 461** in **TS EAMCET**. *2023*

EXPERIENCE

RISC-V Simulator | *Computer Architecture | Prof. Rajesh Kedia, IIT Hyderabad* *Aug'24 - Dec'24*

- Designed and developed a **RISC-V assembler and simulator in C++**, incorporating cache, memory, and register simulations, along with error handling for seamless assembly-to-hex conversion and program execution.
- Designed and deployed a web interface for the simulator using **ExpressJS** (backend), **ReactJS** (frontend), and **Nginx** (hosting), ensuring efficient performance and deployment.

Inter-IIT Tech Meets | *IIT Madras (12.0) & IIT Bombay (13.0) | 5th and 6th Positions* *Dec'23 & Dec'24*

- **Tech-Meet 12.0:** Developed a **simulation game** where players manage the growth of a town or village, integrating **GIS data** to replicate real-world locations accurately.
- **Tech-Meet 13.0:** Developed a **horror game** with innovative mechanics, utilizing **Shaders** and **VFX Graph**.

RELEVANT COURSES

- **Artificial Intelligence:** Programming for AI, Foundation of Machine Learning, Convex Optimization.
- **Computer Science:** Discrete Mathematics, Data Structures and Applications, Algorithms, Computer Architecture, Operating Systems, Database Management Systems, Compilers.
- **Others:** Matrix Theory, Linear Systems and Signal Processing, Probability and Random Variables, Statistics.

PROJECTS

Face Recognition System for Automated Campus Security | *Epoch, IIT Hyderabad*

- Developed an approach for storing image vectors that employs a **K-Means model**, achieving a **50% faster search** through the image vectors.
- Developed **anti-spoofing** techniques using **image-to-depth mapping** and **face-landmark detection**.

YOLO | *YOLOv1 Research Paper to Code*

- Developed a real-time object detection system in **PyTorch**, leveraging a **ResNet-50 backbone** with custom convolutional layers and a **custom loss function** for accurate bounding box prediction and class confidence scoring, achieving real-time inference with an **average processing time of less than 300ms** per image.

Image Caption Generator

- Developed a hybrid architecture combining **VGG16** for visual feature extraction with LSTM networks for sequential text generation, implemented using **TensorFlow**.
- Built efficient pipelines for preprocessing images and text, including feature extraction, tokenization, sequence padding, and embedding, to ensure seamless integration into the model architecture.

SKILLS

Languages	C/C++, Python, Javascript, SQL, HTML, CSS, RISC-V(Assembly), C#*
Technologies	PyTorch, OpenCV, Scikit-Learn, Tensorflow, NumPy, Pandas, Matplotlib, ExpressJS
Tools	SocketIO, React, Vite, Docker, Bash, Netlify, Git/GitHub, LaTeX
Technical Skills	Machine Learning, Computer Vision, Natural Language Processing, Web Development, Software Development, Game Development*

POSITIONS OF RESPONSIBILITY

- Core Member at **Epoch** (AI/ML Club) & **Lambda** (Development Club), IIT Hyderabad.
- Machine Learning Core at **Tinkerers' Lab**, IIT Hyderabad.
- **Teaching Assistant** for the course **Probablity and Random Variables(AI1110).**