

# Sai Hemanth Guntur

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## SUMMARY

- **3+ years of experience** in building and deploying machine learning, NLP, and computer vision models in cloud environments (Azure, AWS, GCP).
- Expertise in developing end-to-end ML pipelines using Python, Docker, Flask, and CI/CD tools for real-time and batch inference.
- Strong background in data engineering, MLOps, and creating business intelligence dashboards with Tableau and Power BI.
- Published and presented AI research in international conferences (IEEE, ICCPSMLA) with applications in energy prediction, phishing detection, and object detection.
- Experienced in designing and deploying AI-powered solutions such as chatbots and intelligent assistants, with hands-on knowledge of prompt engineering and integrating LLM-based tools into business workflows.

## EDUCATION

**University of the Pacific – Stockton, CA**

May 2025

Master of Science in Computer Science

**Vignan Institute of Technology and Sciences, Hyderabad, India**

Sep 2021

Bachelor of Technology in Computer Science

## WORK EXPERIENCE

**Teaching Assistant – Storytelling & Visualization | University of the Pacific | Stockton, CA**

Jan 2025 – May 2025

- Led 6+ lab sessions on visual storytelling, data interpretation, and design thinking to support 40+ students.
- Mentored projects using Tableau, Power BI, and Python, improving scores by ~15%.
- Provided 1:1 mentorship and graded 100+ assignments and exams.
- Revamped course materials, raising course ratings from 4.1 to 4.7/5.

**AI/ML Engineer | Capgemini, Hyderabad, India**

Apr 2022 – July 2023

- Developed and deployed ML/NLP models for enterprise-scale systems across Azure, GCP, and AWS.
- Built automated data pipelines using Python and Dataflow to support real-time and batch inference.
- Led deployment of ML models via Docker & Kubeflow; implemented CI/CD and monitoring.
- Created KPI dashboards for business stakeholders using Tableau and Google Data Studio.
- Improved infrastructure automation and access controls using Terraform.

**Junior Data Scientist | Yogi Careers, India**

Jan 2021 – March 2022

- Built predictive models for candidate-job matching using Python and Azure ML.
- Designed features and trained classification models (Logistic Regression, Random Forest).
- Exposed models via REST APIs for integration with recruiting platforms.
- Conducted model validation and performance tuning ( $R^2$ , RMSE).

## KEY PROJECTS

**Solar Energy Prediction using ML & DL (Submitted to IEEE GESS 2025)**

- Built an ensemble predictor using Voting Regressor (DNN + Random Forest + Decision Tree) achieved  $R^2 = 0.92$  on solar energy output data.

**Phishing Website Detection (Published at ICCPSMLA 2025)**

- Developed a phishing detection system using TF-IDF and URL-based features applied Logistic Regression, Random Forest, achieving 96% accuracy. Deployed via Flask for live predictions.

**Bullet Impact Detection using Mask R-CNN (Published at IEEE ICCMC 2022)**

- Built a bullet impact detection framework using Mask R-CNN and annotated datasets. Emphasized anchor optimization and data augmentation techniques.

**Detecting Flying Airplanes in Satellite Images using ML & YOLO**

**(Research Paper | Under Preparation for Submission to IEEE/Elsevier Conference)**

- Trained a YOLOv5 model on custom satellite datasets achieved  $mAP@0.5 = 87.3\%$  through multi-scale augmentation and hyperparameter tuning.

## TECHNICAL SKILLS

**Languages:** Python, SQL, Java, C++

**ML & AI:** scikit-learn, TensorFlow, XGBoost, NLP (spaCy, NLTK), Prompt Engineering

**MLOps:** Docker, Flask, GitHub Actions, REST APIs, CI/CD

**Cloud:** Azure (strong), AWS/GCP (familiar), Terraform, Dataflow

**Databases:** PostgreSQL, Oracle, MySQL

**Visualization:** Tableau, Power BI, Google Data Studio