Praneeth Villuri

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PROFILE SUMMARY

Machine Learning–oriented Software Developer with 2.5+ years of experience building full-stack features, with a strong focus on applied machine learning and data-driven systems. Hands-on experience across NLP and computer vision through end-to-end projects, complemented by strong Python development and a solid foundation in ML concepts and data processing.

EXPERIENCE

Developer Associate   July 2023 – Present
SAP Analytics Cloud, SAP Labs India   *Bengaluru, India*
- Owned and stabilized critical backend and full-stack workflows within **SAP Analytics Cloud**, supporting data modeling, query execution, and analytics features used by global enterprise customers.
- Designed and delivered sentiment-analysis–driven internal features, working with **NLP preprocessing**, data labeling considerations, and validation of model outputs before integrating results into product workflows.
- Led deep-dive investigations into data lineage and metadata persistence issues, resolving **SQL database inconsistencies** impacting **30+** global customers; recognized for clear, evidence-based communication and timely resolution.
- Built automated regression and validation checks for **20+** data workflows, improving system reliability, reducing manual validation effort by **25%**, and preventing production regressions.
- Validated cloud-based analytics workflows across **AWS, IBP, and HANA Cloud** using API-driven testing to ensure consistency and correctness across distributed systems.

PROJECTS

Guess IT! – Online Multiplayer Trivia Game | *Python, REST, React, PostgreSQL, NLP*   May 2022 – 2023
- Built the data pipeline using web scraping and NLP techniques for keyword extraction and similarity-based mapping between content and game prompts.
- Published curated datasets on Kaggle with **200+** cumulative downloads, including data cleaning, labeling, and documentation to support reproducible analysis and experimentation.

Blind Assistance System | *Python, Computer Vision, Deep Learning, Object Detection, Text-to-Speech*   2023
- Designed and implemented a real-time assistive system using deep learning–based object detection to identify surrounding objects from live camera input.Integrated text-to-speech for accessible, real-time object detection feedback.
- Improved object detection from 0.65 to 0.78 mAP by validating model performance across diverse public image datasets like COCO, unsplash,pexels and iterating on inference behavior.

TECHNICAL SKILLS

Machine Learning: Scikit-learn, TensorFlow, NLP, Computer Vision, Object Detection
Programming Languages: Python, Java, SQL (PostgreSQL), JavaScript
Data & Visualization: Pandas, NumPy, Matplotlib
Frameworks & APIs: FastAPI, React, Node.js, REST APIs
Cloud & Dev Tools: Git, Docker, Google Cloud Platform (GCP), VS Code, IntelliJ

EDUCATION

Amrita Vishwa Vidyapeetham   Kerala, India
Bachelor of Technology in Computer Science   *2019 – 2023*
- **CGPA:** 8.87 / 10
- **Relevant Coursework:** Machine Learning, Natural Language Processing, Digital Image Processing, Probability & Statistics, Data Structures & Algorithms

PUBLICATIONS

Surveying Keyword Extractors: Classification, Applications, and Empirical Analysis
(PICET), 2024
Musunuru, V., Nagam, S. P. K., MG, T., **Praneeth Villuri**, Vasantha, G.
DOI: 10.1109/PICET60765.2024.10716076