Abhay Kumara Sri Krishna Nandiraju

+1 520-244-8636 |abhaynandiraju@arizona.edu | LinkedIn: abhaynandiraju | GitHub: srikrish2812

EDUCATION

University of Arizona **Tucson, Arizona**

*M.S. in Information Science: Machine Learning (***GPA:** 4.00/4.00) *Expected Graduation, May 2025*

- **Related Coursework:** Machine Learning, Data Mining, Neural Networks, Artificial Intelligence, Applied Natural Language Processing, Foundations of Information, Data Warehousing and Analytics in the Cloud

Indian Institute of Technology(IIT), Tirupati **Tirupati, India**

*B.Tech in Electrical Engineering (***GPA:** 3.80/4.00) *2019-2023*

- **Related Coursework:** Machine Learning for Image Processing, Deep Learning for Computer Vision, Statistical Signal Processing, Speech Signal Processing, Probability and Statistics, Artificial Neural Networks

EXPERIENCE

WML IT Solutions Pvt Ltd **Remote**

Associate Consultant *Aug 2023 – Apr 2024*

- Integrated large language models-LLMs like GPT-3.5 Turbo, SQL coder to convert natural language into SQL queries using Langchain, Postgres vector database, Flask and Python.
- Enabled users to chat with documents, PDFs, CSV files, relational databases and non-relational databases using LLMs.

IIT Tirupati's Signal Processing and Computer Vision Lab **Tirupati, India**

Computer Vision Research Intern - Research paper under evaluation *May 2022 – July 2023*

- Utilized super-resolution techniques like BSRGAN and bicubic interpolation to improve the detection accuracy of small-objects in the COCO dataset.
- Trained and fine-tuned the Faster-RCNN model using Pytorch by incorporating the above techniques, resulting in an 8% increase in the mean average precision.
- Developed a novel object detection method integrating classical and deep learning techniques, achieving effective model training with minimal data and enhanced detection of unseen and infrared objects.

PROJECTS

Commonsense Validation and Explanation ComVE - SemEval 2020

Natural Language Processing Project ***July 2024***

- Pre-processed and tokenized the ComVe dataset according for three specific tasks
- Fine-tuned RoBERTa model on the ComVE dataset to differentiate between sensical and nonsensical statements, identify the reason for nonsensicality and generate explanations.
- Evaluated the model on the test dataset and observed notable accuracy improvements.

Loan Defaulter Analysis

Machine Learning Project ***May 2024***

- Conducted exploratory data analysis by handling missing values, null values, and visualizing data through various plots.
- Trained models like Bagging, Random Forest, GBM, AdaBoost, XGBoost, CatBoost, and LightGBM using grid-search cross-validation, and evaluated them on the test dataset.

AI Chatbot application

Generative AI Workshop ***Dec 2022***

- Developed an AI chatbot using HTML, CSS, JavaScript, HuggingFace, Gradio, OpenAI and Langchain.

Spam and Ham Classifier

Machine Learning Project ***Sep 2021***

- Collected and pre-processed several messages, and created a spam and ham dataset from scratch.
- Developed a Naive-Bayes classifier achieving 95% accuracy in classifying messages as spam and ham.

SKILLS

Languages: HTML, CSS, JavaScript, Python, C++, SQL, React(Basics)
Frameworks/Libraries: Langchain, Pytorch, Keras(Tensorflow), Scikit-Learn, Transformers, NumPy, Pandas, Flask, Django
Tools: Git, Github, PyCharm, Postgres, Postman, HuggingFace, MySQL, Jupyter Notebooks, AWS, VSCode