Jeshmitha Gunuganti

LinkedIn | GitHub | jeshmitha.gunuganti@gmail.com | +1 (513)-837-7098

Education

Master of Science, Computer Science - Data Science, *- University of Cincinnati, USA* *Aug. 2021 – Present*
Courses: Intelligent Data Analysis, Big Data Analytics, Advanced Algorithms, Machine Learning, Information Retrieval *CGPA: 3.8/4.0*

B.Tech, Computer Science *- VNR VJIET, India* *CGPA: 4.0/4.0* *Aug 2017 - July 2021*

Secured **2nd Prize at V-IGNITE Nationwide Hackathon** for an ML project - **"Engine Failure Prediction."**

- An end-to-end system that predicts any machine malfunction weeks by tracking live data from sensors and automatically turns off the machine without any human intervention while sending notifications to the owner.

Technical Skills

Languages:	Python, Java, C/C++, Data Structures, SQL, MongoDB, Flask, HTML, CSS.
Tools:	20+ AWS services, Terraform, Git, Linux, Docker, Jupyter Notebook, VS Code, PyCharm.
Packages:	PyTorch, NumPy, Pandas, Scikit-Learn.
Data Science:	Statistics, ETL, Feature engineering, Data visualization[PowerBI, Tableau], A/B testing.
Machine Learning:	Supervised & Unsupervised Learning, Recommender systems.
NLP:	NLP pipeline, Text-preprocessing, Word embeddings - Word2Vec, GloVe, BERT, GPT.
Deep Learning:	Sequence models(RNN, LSTM, GRU, Transformer), GAN, Hyperparameter Tuning.
Certifications :	• Data Science For Engineers - IIT Madras • Applied Machine Learning In Python - University Of Michigan.

Work Experience

Machine Learning Engineer - Research Assistant, *University of Cincinnati [Video Processing Lab]* *Oct.2021–Present*
Unsupervised Video Summarization with Adversarial Graph-based Attention Network

- Developed an automatic video summarization model by combining attention mechanism with graph modeling techniques and using VAE-GAN(Variational Autoencoder - Generative Adversarial Network) architecture with transformer encoder.
- Achieved state-of-the-art results compared to the existing unsupervised methods.

Teaching Assistant, *University of Cincinnati* *Jan. 2022 – Dec. 2022*

- "**Intro to Applied Artificial Intelligence & Machine Learning Tools**": Jan 2022 - Aug 2022
- **"Data Structures"** & "**Cloud Computing**": Aug 2022 - Dec 2022
- Graded student projects & assignments and hosted weekly office hours and lab sessions to solve student queries in machine learning and programming concepts.

System Development Engineer Intern, *Amazon.com, Inc.* *Jan. 2021 – July. 2021*
AWS | Python | Java | AWS CDK | Front-end web development *India*

- **SPT Analysis Automation:** Developed an automation tool using AWS services that gives insights from metrics during Service Performance Testing, which reduced the analysis time significantly from 30 mins, when manually done, to 1 min.
- **IRS Enhancement:** Enhanced the Incident Resolver Automation tool to solve the tickets issued from MonitorPortal

Machine Learning Engineer [Innovation Team], *Qvantel Software Solutions* *Jan. 2020 – Jan. 2021*
AWS | Machine Learning | Python | Terraform | Data Visualization *India*

- **Trending Analysis of Social Media:** Performed social media analysis using AWS and visualized the data using QuickSight.
- **AI Chatbot:** Built a Chatbot and integrated analytics tools to get deep insights into the customer experience.
- **AI-powered Call Center:** Established a virtual call center and performed sentiment analysis on caller interaction.

Machine Learning Intern, *International Institute of Information Technology* *Oct. 2019 – Dec. 2019*
Machine Learning | Android App Development | Flask | Python *India*

- Developed an end-to-end system for "Prognostic System Health Management" by building an android application to monitor and predict the machine's health condition that could help the industry environment by providing advanced alerts.
- Analyzed the performance of various algorithms - Decision Tree, XGBoost, SVM, and KNN.

Projects & Research Experience - Publications

Speech Emotion Recognition *- Deep Learning, Python*
"Capsule Network based Speech Emotion Recognition for efficient capturing of spatial features", ICAICR 2021. [Paper]

- Extracted MFCC features from audio recordings and trained the CapsuleNet & CNN-LSTM deep learning models.
- Achieved state-of-the-art 94.01% performance accuracy with the CapsuleNet model, which outperformed traditional models.

Flight Delay Prediction *- Machine Learning, Python*
"Machine Learning Model-based Prediction of Flight Delay.", IEEE - 4th International Conference on ISMAC. [Paper]

- Developed a model to predict the arrival delay of flights at airports using ML algorithms - XGBoost and Regression models.