# SRI H EEDALA

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## EDUCATION

**ARIZONA STATE UNIVERSITY** Tempe, AZ
Master of Science in Electrical Engineering (Machine Learning) GPA: 3.90 2021 - 2023
Relevant Coursework: Artificial Neural Networks; Statistical Machine Learning; Adaptive Signal Processing; Artificial Intelligence; Autonomous Vehicles, Probability & Statistics

**AMRITA VISHWA VIDHYAPEETHAM** Coimbatore, India
Bachelor of Technology in Electronics and Communication Engineering GPA: 8.08 2016 - 2020
Relevant Coursework: Computer Programming; Data Structures; Linear Algebra; Probability & statistics

## TECHNICAL SKILLS

**Programming Languages:** Python, R, SQL, No SQL, C/C++
**Machine Learning & NLP:** NumPy, Pandas, Scikit-Learn, TensorFlow, PyTorch. Naive Bayes, K-Nearest Neighbors (KNN), Random Forest, SVM, XGBoost, BERT, GPT-2, Transformers, regression, classification, clustering, ensemble methods, Bayesian methods
**Cloud Computing:** AWS SageMaker, EC2, S3, Lambda, Glue, Redshift, Google Cloud Platform, Vertex AI
**Data Visualizations:** Tableau, PowerBI
**Version Control:** Git
**Big Data Analytics Tools:** Apache Spark (Pyspark, SparkSQL, Mllib), Hadoop

## WORK EXPERIENCE

**McKesson Corporation** Scottsdale, AZ
**Data Scientist** May 2022 – Present
- Spearheaded the development and deployment of AI/ML-driven demand forecasting applications, reducing forecast errors by 20% and enhancing inventory optimization.
- Used AWS Glue for data prep, automation, and ETL to streamline data ingestion, data manipulation and cleansing. Also, employed Amazon SageMaker for ML model development, training, and deployment, including Natural Language Processing applications.
- Applied Reinforcement Learning techniques, resulting in a 15% improvement in decision-making accuracy across various tasks in supply chain management.

**Arizona State University** Tempe, AZ
**Student Research Aide** Oct 2021 – Apr 2022
- Launched Complex YOLO to enable precise vehicle detection within 3D LiDAR data. Leveraged Extended Kalman Filter techniques for multi-target vehicle tracking.
- Processed a dataset of 103,354 segments with 9-second windows and 5-second overlap for enhanced map-based situational awareness.
- Achieved 83% in avg orientation similarity (AOS) and 91% in Average Precision (AP) in object detection and tracking.

**SWAL Computers** India
**Machine Learning Engineer** May 2020 – Jul 2021
- Led a brand reputation project, collecting data and applying NLP techniques to analyze over 100,000 social media posts mentioning the client's company, products, and services.
- Utilized data visualization tools (Power BI, Tableau) to create 20+ reports and dashboards, enabling stakeholders to track sentiment trends over 12 months and pinpoint key factors, leading to a 15% increase in customer satisfaction.
- Developed a ML model using customer data and transaction history, boosting revenue by 5% in sales.
- Carried out predictive analytics to cross-sell offers recommendation based on individual customer behavior, conducted A/B testing, raising conversion rates by 15%. Customized offers for customer segments, improving engagement by 7%.

**Machine Learning Intern** Jan 2020 – Apr 2020
- Collaborated on machine learning project focused on predicting credit risk, credit fraud and improving financial security.
- Performed extensive Exploratory Data Analysis (EDA) to extract domain insights and reveal impact of variables.
- Attained AUC-ROC score of 0.953 by optimizing model hyperparameters by using Grid Search CV techniques.

## UNIVERSITY PROJECTS

**Customizing ML Predictions for Online algorithms** Jan 2023
- Tailored ML predictions to optimize online algorithms by upgrading loss function and resolve classical rent-or-buy problem.

- Conducted theoretical analysis and numerical simulations and Achieved CR of 1.025, approaching offline algorithm results.

**Adaptive Offer Bot: A Hybrid Generative AI Approach for Personalized Offer Recommendations** Jan 2023

- Developed and deployed hybrid Generative AI project incorporating the GPT-2 model to understand user input for a Text-Based Offer Recommendation System.
- Implemented a scoring mechanism to measure the likeness between user preferences expressed in natural language and available offers, ensuring precise and relevant search results.
- Implemented a system to adapt to user feedback, refining the selection of offers over time and ensuring personalized and contextually relevant recommendations.
- Orchestrated the Flask deployment, creating a scalable and efficient backend infrastructure for a responsive and real-time user experience.

**Adversarial Attack on Speaker Recognition Systems and Detection 0f An Attack on Smart Speakers** Aug 2022

- Created audio input designed to deceive speaker recognition system operating in black box environment. Obtained 99% success rate in deceiving the system's ASR.
- Executed machine learning model employing Array fingerprinting for attack detection, achieving high detection rate of 98% across diverse scenarios.

**6D Object Pose Estimation with Hybrid Intermediate Representation** Aug 2022

- Headed a team of 4 members in successful implementation of deep learning algorithms for 6D object pose estimation. Exploited diverse geometric information from images, including key points, edge vectors, and symmetry correspondences and performed regression analysis. Realized a prediction accuracy rate of 86% in object pose estimation using pytorch.

**Image Caption Generation** Sep 2021

- Utilized advanced deep learning techniques, merging CNN and LSTM networks to construct the image caption generator. Accomplished BLEU score of 0.29 while executing project within TensorFlow, Keras framework in python.