Amitha Akepati

Email: amitha.akepati00@gmail.com **In**: Amitha Akepati **Ph**: +1(469)-318-8841 **GitHub**: AAmitha **Portfolio**: Amitha Akepati

SUMMARY

- Overall, 2 years of experience in Data Structures and Algorithms, Machine Learning Techniques: Classification, Regression, Clustering, Statistical Modelling, Data Analysis and Data Visualization with Python, Big Data, SQL, Web Technologies, Problem Solving and Analytical Skills, MySQL, Artificial Intelligence.

TECHNICAL SKILLS

Programming Languages: Python, GoLang, PHP, JavaScript, HTML5, CSS3

Machine Learning: Regression, Classification, clustering

Database/OS: SQL, MySQL, SQLite3, MongoDB, Windows

Statistical Analysis: Hypothesis Testing

Data Analytics/Data Visualization-Libraries/Tools: Matplotlib, Microsoft Power BI, Seaborn, Alteryx

Big Data Technologies: Hadoop, Spark

Software Methodologies: Agile, Scrum, JIRA

Build Tools/Platforms: Git, HPSB [Hewlett-Packward Service Bus] Middleware Tool, VS Code, PyCharm, Anaconda, Jupyter, MS Office[Excel, Word, PowerPoint, Outlook], Power Automate

EDUCATION

University of Texas at Arlington, Arlington, Texas ***Master's in Data Science*** ***Jan'23-May'24***

- **GPA**: 3.25/4

Annamacharya Institute of Technology and Sciences, Rajampet, India ***Bachelor's in Computer Science*** ***June'17-July'21***

- **GPA**: 3.6/4

INDUSTRIAL EXPERIENCE

Graduate Research Assistant, University of Texas at Arlington, Arlington, TX ***Oct'23-Present***

- Assisting Dr. Aera Kim Leboulluec on **Generative AI** – Agricultural Research
- Research involved in focusing on Generative AI for agricultural Research, soil health assessment, crop recommendation, and predictive modelling for crop yield, involves a mix of cutting-edge technologies and techniques.
- Implementing ML and DL algorithms to analyze large datasets comprising weather patterns, soil characteristics and historical crop data for predictive modelling. Leveraging GANs a subset of Deep Learning for Generative AI to simulate and generate realistic data. Used for creating diverse datasets to train the models.
- Utilizing Statistical Techniques and data analytics tools to extract meaningful insights from the collected data. Regression analysis and other statistical models employed to understand relationships between variables.

Technologies Involved: Machine Learning(ML), Deep Learning, Generative Adversarial Networks(GANs), Data Analytics and Statistical Modelling, Big Data Processing.

Software Engineer, DXC Technology, Bengaluru, Karnataka ***June'21-Aug'22***

- Implemented and managed HP Service Bus(**HPSB**) web tools for industrial data management at DXC Technology, Facilitated web development technologies for creating self-service activities for message management and tracking through HPSB web tools.
- Orchestrated the integration of HPSB web tools, optimizing message flow oversight in industrial settings and **Database Technologies** for managing and locking HPSB projects to specific production instances (Prd1, Prd2) ensuring efficient data deployment in production.
- Developed component search functionalities using **Java** and **JavaScipt**, enhancing the location of critical HPSB components for industrial data transmission. Engineered HPSB message tracker, allowing searches for industrial projects, components, file names, host names, IP addresses, and business object IDs(BOID).
- Established an error browser feature for swift identification and resolution of industrial component errors affecting data transfers. Optimized listener components using **optimization techniques** through strategic restarts, minimizing downtime and ensuring continuous data flows in industrial operations.
- Mentored two junior engineers in python best practices for security, stability and extensibility of the service and effectively managed anomalous activities, demonstrating leadership and teamwork skills.

PROJECT EXPERIENCE

- **Personalized Travel Companion** ***Dec'19***

  An Intelligent Conversational Agent for Trip Planning

  Hackathon Smart Bridge in collaboration with IBM. Developed a Chatbot using IBM Watson to simplify travel planning. Demonstrated chatbot to 100+ users at hackathon received feedback on usability from 80% of testers.

- **AI Pandemic support** ***May- July'21***

  Real-Time Face Mask Detection with CNN & Deep Learning

  During Pandemic addressed a critical challenge by creating a real – time face mask detection model. Implemented using Convolutional Neural Networks CNN to achieve an impressive model accuracy of 93.88%. Demonstrated Deep Learning expertise in object detection, specifically in identifying and localizing face masks using patter recognition. Achieved an F1 score of 0.94, emphasizing the models precision and recall performance.

  Technologies Involved: Python, Anaconda, Pycharm, Sklearn, Pandas, NumPy, Matplotlib, Seaborn, OpenCV, Tensorflow, Keras.

- **Exploratory Data Analysis and Predictive Modelling** ***March-May'23***

  Performed EDA on given dataset to uncover patterns and insights. Developed Predictive regression models to forecast continuous variables, showcasing expertise in statistical modeling. Explored and compared performance of various regression techniques, highlighting analytical and modeling skills. Evaluated model performance using metrics with R-squared value of 0.82, indicating models effectiveness in explaining the variance in the data.

  Technologies Involved: Python, Jupyter Notebook, Data Visualization Libraries – Matplotlib, Seaborn, Statistical Techniques: Descriptive statistics, Inferential statistics, Hypothesis testing, Data cleaning tools: Handling missing values, Outliers, Machine learning libraries, Data Preprocessing tools: Handling imbalanced data, Feature scaling, One-hot encoding, Cross-validation libraries: k-fold for assessing model performance, Evaluation metrics: R-squared, Mean Squared Error(MSE), Mean Absolute Error(MAE) for predictive model accuracy.

- **Intelligent Indian railway reservation system with Python and SQLite3** ***May – June'23***

  Developed a Python GUI resulting in a 25% increase in user satisfaction for booking train tickets and managing reservations. Achieved 98% data integrity with SQLite3 database to effectively store.

  Technologies Involved: Python (primary programming language), SQLite3 (Database Management System), GUI (Graphical User Interface) development using Python libraries: Tkinter, Kivy, Data Integrity in SQLite3 with various features includes primary keys, foreign keys, unique constraints, Testing and Quality assurance.

CERTIFICATIONS

- Microsoft Azure Fundamentals
- HackerRank Python, Problem Solving
- Power BI by PWC
- Alteryx Designer Core

ACHIEVEMENTS

GOOGLE Foobar Challenge - Completed all 5 Levels, An invitation only coding challenge presented by GOOGLE.