

# Vedha Sree Thummagunta

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## Education

**University of North Carolina at Charlotte**

*Master of Science in Computer Science*

**August 2023 – Present**

*Charlotte, North Carolina*

Coursework: Database Systems, Software System Design and Implementation, Data Structures and Algorithms, Big-data analytics for Computing Advantages, Data Mining, Cloud Computing for Data Analytics

## Experience

**Instructional Assistant, University of North Carolina at Charlotte**

**January 2024 – Present**

*Artificial Intelligence, Computer Vision, Usable Security & Privacy*

*Charlotte, North Carolina*

- Currently working as a Teaching Assistant for Computer Vision, Usable Security & Privacy and in the previous semester for Artificial Intelligence Literacy.
- Assisted professors in administrating more than 200 students for 3 classes. Graded more than 4 assignments per week, mid-term reports, and about 4 projects in each class.
- Held responsibility for leading breakout room sessions. Enlightened students about intricate concepts like Artificial Intelligence, Search engines, Large Language Models (LLMs), Computer Vision, Phishing concepts.

**Research Teaching Assistant, DIYA Research Inc.**

**June 2024 - August 2024**

*Machine Learning, Python, Decision-Tree, RandomForest*

*Milpitas, California*

- Mentored a team of 4 high-school graduates, facilitating their mastery of machine learning concepts and data analysis tools , including Pandas, Seaborn, Matplotlib.
- Guided the visualization and interpretation of complex datasets to enhance their practical understanding . Their efforts culminated in achieving a recall rate of 95% and a precision rate of 88%.
- Conducted 5 weekly instructional sessions and provided continuous support through slack and email, ensuring they complete the research projects in time. Maintained a detailed project tracker, making sure of regular updates to GitHub.

## Technical Skills

**Programming Languages:** Python, C, C++, Java, C#, JavaScript

**Web Technologies:** HTML, CSS, Spring Boot, ReactJs, NodeJs, Bootstrap, PyTorch, Microservices, REST API's

**Libraries:** Numpy, Pandas, TensorFlow, Scikit-learn, Matplotlib, NLTK

**Databases and Cloud:** MySQL, MongoDB, AWS, Microsoft Azure

**Platforms and Tools:** Windows OS, Linux, Ubuntu, Visual Studio

**Others:** Software Testing, Debugging, Object Oriented Programming, Design Patterns, Artificial Intelligence, Deep Learning, Natural Language Processing, Docker, Hadoop, Hive, Apache Spark, Virtualization and Containerization, Embedded Systems, Computer Architecture, TCP/IP Protocol

## Projects

**Fraud Detection Analysis | Python, Pandas, SQL, Docker, Spark, Virtual Box**

- Developed a robust fraud detection system to safeguard financial transactions using Spark's MLlib for Machine Learning and pandas for data visualization.
- The analysis included data acquisition and preprocessing, data analysis, and outlier detection using the Interquartile Range (IQR). Built models using Logistic Regression and Gradient Boosting Trees Classifier, achieving an accuracy of 94%.

**NewsApp Web Application | HTML, CSS, JavaScript, Bootstrap, React.js, React Router, Visual Studio, Fetch API**

- Implemented article categorization and search features, organizing over 1,000 news articles into categories like technology, business, and sports, enhancing user experience and accessibility using React.js.
- Designed detailed article views displaying key information, increasing user engagement by 25%, with features like headlines, publication dates, sources, and summaries.
- Ensured cross-device compatibility, improving mobile accessibility by 40% through responsive design, making the application user-friendly on desktops, tablets, and smartphones.

**Sentiment Analysis using NLP | Python, Pandas, NLTK, Textblob**

- Developed a Python program using the TextBlob library under NLTK to analyze sentiment on textual data.
- The project is aimed at providing insights into the sentiment (positive, negative, or neutral) and subjectivity (opinion-based vs. factual) of given statements or text snippets.
- A polarity score of 1 signifies a positive statement, while a score of -1 indicates a negative statement.

## Honors & Certifications

- **Gold Medal Winner:** Received a gold medal for being the top ranker in the ECE Department among 200 peers.
- **Prathibha Award:** Top ranker in 10th standard examinations at state level. Received Prathibha Award for academic excellence from the State government of AP in 2017.
- **Student of the Year Award:** Recognized as the Student of the Year for exemplary performance and all-around excellence in the 8th standard, awarded by the Life Insurance Corporation of India (LIC).
- Member of **Amazon's Women of the World**
- Introduction to Statistics in Python by DataCamp