SAI CHARAN CHANDU PATLA

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PROFESSIONAL SUMMARY

Motivated Master's student in Data Science with a solid foundation in IT, machine learning, and statistical modeling. Proficient in programming languages such as Python, C#,and SQL, with hands-on experience gained through academic projects and research. Successfully developed and implemented models for plagiarism detection, and other innovative applications in data science, computer vision, and engineering. Skilled at solving complex problems with a focus on leveraging data science techniques to create impactful solutions, particularly in medical and manufacturing industries. Passionate about translating academic knowledge into practical, data-driven results. Actively seeking an opportunity to contribute to a dynamic organization by applying advanced analytical skills and technical expertise.

CORE COMPETENCIES:

Data Science & Machine Learning:	▪ Statistical Analysis ▪ Predictive Modeling
Programming & Tools:	▪ Python ▪ Java ▪ PowerBi ▪ C ▪ SQL ▪ HTML ▪ CSS
Research & Analysis:	▪ Data Science Pipelines
Data & AI Product Management:	▪ Business Planning ▪ Product Lifecycle Management ▪ Cross-functional Collaboration

EDUCATION

Tagliatela College of Engineering, University of New Haven ▪ West Haven, CT May - 2025
Master of Science in Data Science

- **Coursework:**
  ▪ Machine Learning ▪ Computer vison ▪ Power BI ▪ Deep Learning ▪ Natural Language Processing (NLP) ▪ Leadership in Data & AI Products ▪ Artificial Intelligence ▪ etc.
- **Tools:**
  ▪ Python ▪ SQL ▪ TensorFlow ▪ Hadoop ▪ Tableau ▪ AWS Athena
- **Achievements:**
  ▪ Graduate Dean's Scholarship

Tagliatela College of Engineering, University of New Haven▪ West Haven, Connecticut, USA
Master's in data science ▪ *Dean's Scholarship*

Sreenidhi Institute of Science and Technology, Jawaharlal Nehru Technological University ▪ Hyderabad, Telangana, India
Bachelor in Technology ▪ *Telangana ePASS Scholarship* ▪ National Means cum Merit Scholarship

DATA & AI PROJECTS

University of New Haven ▪ West Haven, CT

Plagiarism Detection using Transformers ▪ West Haven, Connecticut Oct 2024– Dec 2024
University of New Haven/Data Science/NLP

- Detecting plagiarism is a major problem in both professional and academic settings. This project makes use of state-of-the-art transformer-based models to precisely identify information that has been plagiarized, including paraphrase, semantic rewording, and verbatim copying.
- BERT, RoBERTa, T5, and a BERT+LSTM hybrid are among the key models that were assessed; these models were trained and optimized using datasets that are particular to plagiarism.
- Best Overall Model: BERT, achieving 85.87% accuracy and 85.90% F1 scores on both datasets (MRPC and SNLI).

OBJECT DETECTION USING YOLOv5s ▪ West Haven, Connecticut Aug 2024– Dec 2024
University of New Haven/Data Science/Deep Learning

- The objective of this project is to fine-tune a YOLOv5 object detection model to detect and classify two specific object categories (Trees, Lights) in a custom dataset.

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- YOLOv5's architecture allows for faster training and inference times, making it highly suitable for detecting multiple objects in diverse scenes with limited data. Post training, we achieved 65.8% precision, 69.6% recall, mAP@0.5 was 67.1%, mAP@0.5:.95 was 32.3%.
- The dataset was collected at the University of New Haven.

Weather Classification using Deep Learning Sep 2024 – Dec 2024

University of New Haven/Data Science/Deep Learning

- Classify weather conditions into 5 classes: Rainy, Sunrise, Cloudy, Foggy and Shine.
- Initially built a custom CNN with 3 convolutional layers. Performed optimization & hyperparameter tuning. Achieved 94% accuracy.
- Performed transfer learning with a pre-trained model ResNet18 and achieved 96% test accuracy and 94% validation accuracy.

Real-Time Trend Analysis Pipeline for Spotify Mar 2024 – Apr 2024

University of New Haven/Data Science/Distributed and Scalable Systems

- Designed and implemented a scalable data engineering pipeline to perform real-time trend analysis on Spotify streaming data.
- Used Python to interact with the Spotify API, fetching metadata such as song titles, artists, and popularity.
- Leveraged AWS services, including Lambda for data processing, S3 for storage, Glue for cataloging, and Athena for analytics.
- Utilized Apache Kafka for real-time data streaming and Apache Spark for large-scale data preprocessing.
- Created interactive dashboards using Plotly, visualizing insights from SQL queries on cleaned data.

Email spam detection using Machine learning algorithms Aug 2023 – Dec 2023

University of New Haven/Data Science

- Data was collected from Kaggle that contains 5572 records of 2 columns "message, category".
- Compared various ML techniques like Logistic regression, Decision tree, KNN, Random Forest, Stacking model.
- Stacked model (STACK) was a strong performer across multiple metrics, including 98.5% accuracy, 98.7%precision, 99.5%recall, and 99.1% F1 score.

Speech Recognition using Hidden Markov Models Oct 2023 – Dec 2023

University of New Haven/Data Science/Artificial Intelligence

- The information was gathered from GitHub, which has an audio folder with 15 subfolders and 15 corresponding audio files in.wav format.
- Utilized the Viterbi algorithm for decoding search to determine the most likely set of states that produced the input, the short-term Fourier transform for feature extraction, and the acoustic model used by the recognition system to identify speech.
- HMM was the best among all modeling techniques as it increases recognition accuracy and speed.

PROFESSIONAL CERTIFICATIONS & MEMBERSHIPS

Deep Learning Fundamentals	*IBM*	Jan 2023
Data Analysis with Python	*IBM*	Jan 2023
Big Data 101	*IBM*	Jan 2023
Machine Learning with R	*IBM*	Jan 2023
Statistics 101	*IBM*	Jan 2023
Machine Learning with Python	*IBM*	Jan 2023
Python Programming for Everybody	*Coursera*	Jan 2023
AWS Certified - Solutions Architect	Udemy	Feb 2023
AWS Certified - Developer	Udemy	Feb 2023
AWS Certified - SysOps Administrator	Udemy	Feb 2023
AWS Certified - Cloud Practitioner	Udemy	Feb 2023

LANGUAGES

English	*English Language Communication Skills*	Dec 2022
Hindi		

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Telugu