

Pavani Samala

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EDUCATION

The George Washington University, Washington, DC	May 2023
Master of Science, Data Science (GPA: 3.9)	
<i>Relevant Coursework:</i> NLP, Machine Learning, Computer Vision, Cloud Computing, Algorithm Design	
Pennsylvania State University, University Park, PA	May 2021
Bachelor of Science, Engineering Science	
Minor, Engineering Mechanics	
<i>Relevant Coursework:</i> Computer Methods in Engineering Science, Analysis in Engineering Science	

TECHNICAL SKILLS AND CERTIFICATIONS

- **Programming Languages:** Python, R, SQL, MongoDB, Neo4j
- **Tools:** AWS, MySQL, Tableau, MATLAB, GitHub, HTML, Google Collab, Word, Excel
- **Certifications:** LinkedIn Learning: Tableau for Data Scientists

TECHNICAL PROJECTS

<u>Comparative Analysis of Vision Transformers</u> Python	2023
• Built a Vision Transformer to classify Chest X-Rays into different lung diseases, increasing the baseline model accuracy by 8.5%. Tools: PyTorch, Timm Library, cv2	
<u>Traffic Sign Classification Using Deep Learning</u> Python	2022
• Finetuned Capsule Neural Network and CNN to classify traffic signs, reaching an accuracy of 93% and 95% respectively, and explained models using LIME. Tools: Pytorch, PIL, sklearn, NumPy	
<u>Sentiment Analysis on Twitter Airline Data Using Transformer-Based Model</u> Python	2022
• Combined BERT and MLP to classify Twitter data, achieving an accuracy of 76%, and implemented Integrated Gradients to explain model's reliability. Tools: Pytorch, NumPy, pandas, Scikit-learn, seaborn	
<u>Wine Quality Prediction Using Machine Learning</u> Python	2022
• Created a pipeline to preprocess the data, find optimal learning rate through hyperparameter tuning through Grid Search, and determine the best performing model. Tools: TensorFlow, matplotlib, seaborn	

WORK EXPERIENCE

Broadstreet Institute , Remote <i>Quality Assurance Data Analyst</i>	Aug 2022-Nov 2022
• Verified the integrity of COVID-19 data and reduced human errors by 20% by comparing manually generated datasets against NYT data sources	
D.L. Howell & Associates , West Chester, PA <i>Civil Designer</i>	May 2021-Jan 2022
• Successfully optimized the scope of a multi-million-dollar project by increasing the number of residential developments by 10% through strategic housing design	
• Assisted project managers in assessing benefits and risks by analyzing cost estimates, project timelines, and impact on communities	
• Supported business development efforts by providing professional engineers with data and policy reports prior to decision-making process	
Penn State Ultrasound Lab , University Park, PA <i>Undergraduate Researcher</i>	Sept 2019-May 2021
• Analyzed ultrasonic data to identify the optimal wave speed for reducing defects in metals, leveraging statistical tests and data visualization to optimize results	
• Automated calculation of mean and standard deviation values to reduce experiment duration by writing MATLAB code	
• Synthesized findings into recommendations and presented data visuals to effectively communicate valuable insights and technical concepts to cross functional team	

LEADERSHIP & EXTRACURRICULARS

The George Washington University , Washington, DC <i>Teaching Assistant</i>	Aug 2022-May 2023
Data Science Association , Washington, DC <i>Cabinet Member</i>	Jul 2022-May 2023