






Sai Manichandana Devi Thumati

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SUMMARY

I am an upcoming MS in Computer Science student at Northeastern University, with interests in machine learning and deep learning. During my undergraduate studies, I developed AI-driven tools for analyzing complex datasets and published research on dental disease prediction using neural networks. Currently, I am a Graduate Quality Engineer at CBA and am passionate about driving technological advancements

EDUCATION

Master of Science (MS) <u>Computer Science</u>	Starts on Sep 2024
Northeastern University	Boston, MA, United States
Bachelor of Technology (B.Tech) <u>Computer Science and Engineering</u>	July 2019 - June 2023
Amrita Vishwa Vidyapeetham	Amritapuri, Kerala, India

EXPERIENCE

Associate Quality Engineer - Financial Crime Technology	April 2024 - Present
Commonwealth Bank of Australia	Banglore, Karnataka, India
<ul style="list-style-type: none">• Reponsible For Collecting and testing data using Teradata, SQL and related internal tools.• Current Learning : Tableau. Scala, AWS	
IoT Intern - IoT & Automation Department	Jan 2023 - Nov 2023
Maersk Global Services Pvt Ltd	Banglore, Karnataka, India
<ul style="list-style-type: none">• Developed the software simulators using Python language programming for multiple reefers (containers)• Conducted manual testing of end-to-end test scenarios for various reefers• Worked with remote and virtual environments during testing such as WSL, Mqtt server• Created automated testing software in Python Language programming for multiple reefers which can reduce the human errors and time for testing• Gained experience in writing and testing of software in Python language, serial communication, robot testing framework, mosquito server, unit testing, and mock serial in Python language.	
Java Intern (Remote)	May 2022 - June 2022
TiNet Business Solutions Pvt. Ltd	Banglore, Karnataka, India
<ul style="list-style-type: none">• Proficiently acquired skills in JDBC with PostgreSQL, Spring framework, and Java Persistence API (JPA)• Created comprehensive documentation on JDBC with PostgreSQL, Spring framework, and Java Persistence API technologies and actively supported project developers during demonstrations.• Gained valuable insights into industrial technology requirements such as Security and Data Protection.	

PUBLICATIONS

Conference Paper (peer - reviewed)
SMD Thumati , K Dhanya, H Sathish, KCS Madan, S Rani. <u>A Comparative Study on the Working of GNN and CNN on Panoramic X-Rays in Prediction of Dental Diseases</u> . In 2023 8th International Conference on Communication and Electronics Systems (ICCES)

PROJECTS

Title: Detection of Dental Diseases using Deep Learning
Duration: August 2022 – May 2023 ; Team Size: 4
Brief Description: By employing sophisticated deep learning models such as Convolutional Neural Networks (CNN) and Graph Neural Networks (GNN), we aim to create a highly accurate and efficient AI-driven solution for early disease detection.

Individual Role:

- Reviewed two influential research papers, extracting insights to inform our project's direction
- Crafted an intuitive web application interface for seamless user interaction
- Contributed to implementing CNN in the project's back end. Fine-tuning its architecture improved predictive precision

Title: Facial Emotion Detection with Computer Vision

Duration: August – September 2022 ; Team Size: 3

Brief Description: Developed an emotion detection system that utilizes facial expressions and movements which played a crucial role in gauging customer sentiment towards goods or services and significantly influencing customer-personnel interactions.

Individual Role:

- Data pre-processing, image augmentation, and feature extraction
- Training, and validation using Convolutional Neural Networks

Title: Share Ride Application in Django Framework

Duration: February – April 2022 ; Team Size: 5

Brief Description: Share Ride Application (SRA) is intended to help the user to share car rides with other users traveling on the same route.

Individual Role:

- Conducting an extensive literature review by delving into existing research and insights
- Contributed valuable knowledge to inform and enrich the project's design and implementation
- Visually shaping our project through essential diagrams including class diagrams, data flow diagrams, and use case diagrams

Title: Memotion using NLP

Duration: February – April 2022 ; Team Size: 3

Brief Description: Sentiment analysis for memes For Image captioning, using 2 models (for image caption and second for text classification)

Individual Role:

- Implemented code for Image captioning,
- Used 2 models, Inception V3 (for feature extraction) and Recurrent neural network (for predicting the next word from sequence and feed forward network)

VOLUNTEERING/COMMUNITY SERVICE

Served as a Social Media Research Intern at People For Animals (NGO) 2022, India

Facilitating research for the establishment of a robust network to support lobbying initiatives for animal-rights.

Conducted a session on 'Cyber Crimes' as part of Student Social Responsibility at Amrita Vishwa Vidyapeetham, India

For raising awareness among youth about the intricacies and potential threats of online security.

SKILLS

Research Skills: User studies (design experiments (structured and semi-structured study design, quantitative, qualitative and mixed-method data analysis, systematic literature review and survey

Visualization Skills: Tableau

Front-end Web Dev Skills: JavaScript, HTML5, CSS3

Back-end Web Dev Skills: Java Databases: SQL Based (MySQL)

Data Science & Applied M.L.: Python (NumPy, Pandas, scikit-learn), JavaScript (TensorFlow.js)

Document Creation: Microsoft and Google Office Suites, LaTeX, Markdown Graphics

Languages: English, Hindi, Telugu