

Yashashvini Rachamallu

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EVIDENCE OF EXCELLENCE

Enthusiastic Software Developer in training, pursuing a Master's in Computer Science at Michigan State University. Skilled in Python, JavaScript, C/C++, and Java, with practical experience in course enhancement at Michigan State and ASIC flow innovation at Intel Labs. Committed to leveraging my programming knowledge and understanding of distributed systems in a challenging internship role. Available for opportunities starting May 2024 for a duration of 8 months.

EDUCATION

Michigan State University

Master of Science in Computer Science

Jan 2023 - December 2024

GPA: 4.0/4.0

PES University

Bachelor of Technology in Computer Science and Engineering

Aug 2018 - Jun 2022

GPA: 3.86/4.0

SKILLS SUMMARY

Languages: Python, SQL, JavaScript, C/C++, Java, with the ability to quickly adapt to new programming environments.
Frameworks and Platforms: AWS, NumPy, Pandas, Matplotlib, TensorFlow, Hadoop, Apache Spark, NLTK, SciPy, PyTorch, MPI, OpenMPI, Linux, Windows, Raspberry Pi, Distributed Systems, Tableau, HTML/CSS, YEX, LACC.
Soft Skills: Verbal Communication, Problem Solving, Adaptability, Teamwork & Collaboration.
Other: Photoshop & Marketing Certification, Machine Intelligence & Data Science Specialization certificate by PES University. Certified proficient in ML Techniques by Ismiriti, IIT Kanpur.

EXPERIENCE

Michigan State University

Teaching Assistant

Jan 2023 - Present

- Enhanced student learning for over 1,500 students by collaborating with professors to upgrade lab exercises and modernize the course website, ensuring an enriched academic environment.
- Optimized course operations, improving efficiency by 20% through streamlined management of materials and coordination, directly contributing to smoother course delivery.

Michigan State University

Research Assistant

Aug 2023 - Nov 2023

- Improved road crack detection using Mask R-CNN and Faster R-CNN for precise segmentation and marking, achieving unprecedented detection speeds of 0.001 seconds per image.
- Achieved a 30% faster maintenance response and a 40% increase in detection accuracy, significantly improving the safety and efficiency of infrastructure repairs.

Intel Labs

Technical Intern

Aug 2021 - Jun 2022

- Innovated in ASIC flow by integrating deep learning technologies, reducing project development cycles by up to 270 days through the application of Graph Neural Networks, reinforcement learning, and clustering algorithms.
- Employed a comprehensive set of tools (Deep Graph Library, PyTorch, TensorFlow, SQL, TCL) to prototype solutions, enhancing efficiency by 25% and supporting the transition towards more agile development methodologies.

Ismriti, IIT Kanpur

IOT&ML workshop and Intern

May 2019 - June 2019

- Designed an autonomous robot with Blynk app integration for remote control and data collection. Utilized a Raspberry Pi to train a neural network for obstacle avoidance. Additionally, developed various applications via MIT App Inventor for the robot's diverse functionalities.

PROJECTS

Covid-19 Classification Using Computer Vision and Deep Learning

Michigan State University

- Led a key COVID-19 diagnostics project, using CNNs and data augmentation techniques to achieve up to 97% accuracy with deep learning models on traditionally augmented datasets.
- Implemented Generative Adversarial Networks (GANs) for image generation, navigating computational challenges to develop a hybrid approach that enhanced COVID-19 classification on lung MRI scans.

Stock Market Prediction with Deep Learning Models

Michigan State University

- Implemented the strategic selection of the optimal forecasting model after a meticulous analysis, favouring the Long Short-Term Memory (LSTM) model over Gated Recurrent Units (GRU) and other methods due to its well-balanced accuracy.
- The development of a resilient stock price prediction system, achieving a noteworthy 63% accuracy in forecasting the upcoming week's stock prices. Introduced groundbreaking integration of sentiment analysis, resulting in a significant 47% accuracy.

Language detection using NLP

Michigan State University

- Developed a language identification system, harnessing the capabilities of BERT embeddings and LSTM networks, analyzing four diverse datasets encompassing 60 distinct languages.
- Enhanced language processing algorithms by integrating techniques like Bag of Words and Naive Bayes, culminating in model accuracies of up to 86% for language classification and identification.

Restaurant Recommendation System

University of Illinois Chicago

- Developed a recommendation system utilizing a dataset of 200,000 Yelp Business entries, applying techniques in exploratory data analysis, integrating Regression and classification clustering techniques to deliver accurate restaurant recommendations.
- Achieved a 98.5% prediction accuracy rate in business ratings, which was instrumental in creating an effective restaurant recommendation system.

Ulterior Website

PES University

- Spearheaded the development of 'The Ulterior', a literary web platform, employing HTML, CSS, PHP, Bootstrap, and JavaScript to offer users free access to a wide range of books and stories, enhancing user engagement.
- Implemented a user-friendly interface and responsive design, ensuring seamless access and a high-quality browsing experience, reflecting technical proficiency in web development and design principles.

Publications: Published 3 research projects titled **Image Caption Generation for Low Light Images**, **Fake News Detection on Indian Sources**, and **Similar Face Detection for Indian Faces using Siamese Neural Networks**