

EDUCATION

SRM Institute of Science & Technology

Masters of Technology - Computer Science and Engineering with specialization in Data Science - GPA: 9.3

2021 - Present

- Courses: Foundations of Data Science, Artificial Intelligence, Data Structures And Algorithms, Operating Systems, Big Data Tools and Techniques, Probability and Statistics, Database Management Systems
- Advisor: Dr.K Shantha Kumari, Assistant Professor, Department of Data Science And Business Systems, SRMIST

Decent Junior College

Maharashtra State Board of Secondary & Higher Secondary Education - Marks: 97.8%

2019 - 2021

Khubchand Bajaj Central Public School

Central Board of Secondary Education - Marks: 91.8%

2014 - 2019

RESEARCH EXPERIENCE

Data Science Community SRM

2022 - present

Piano Sheet Converter — TensorFlow, Flask, MIDI, Librosa, Reactjs

Chennai, Tamil Nadu

- Spearheaded a research project dedicated to developing an advanced music transcription system, delivering accurate PDF transcripts based on supplied music rhythms. The project harnessed the extensive Musicnet Dataset, a repository housing over 10,000 MIDI files, to achieve precise musical notations.
- Leveraged the Constant-Q Transform (CQT) for precise pitch representation. Integrated prettymidi for MIDI file handling and manipulation. Employed Librosa for efficient audio feature extraction and analysis. The successful integration of these cutting-edge tools significantly contributed to the project's overall success.
- This research initiative revolutionized the field of music transcription by automating the process of converting audio compositions into professionally formatted PDF sheet music. The developed system streamlined the workflow for musicians, composers, and music enthusiasts, offering a valuable resource for their creative endeavors.

Supervisor: Dr. Priya S, Assistant Professor, Department of Computing Technologies, SRMIST

SRM Institute of Science and Technology, Kattankulathur

November 2022 - August 2023

Leaf Disease Cycle GAN Data Augmentation — Tensorflow, OpenCV

Chennai, Tamil Nadu

- Collaborated closely with the Tamil Nadu Farmers Welfare Department to enhance the detection of Lemon Leaf disease imagery, which resulted in a 30 % improvement in the image database for model prediction
- Implemented CycleGAN, achieving a 40% increase in the Lemon Leaf Image dataset with unique variation within limited images provided, is crucial for the training phase
- The generator consists of 12 encoder and decoder blocks and 6 transformer blocks, significantly enhancing the mapping accuracy between original lemon leaf images and augmented variations. The discriminator model, based on the
- MobileNetV2 architecture, achieved an impressive 95% accuracy in distinguishing between real and generated domain images, contributing significantly to the CycleGAN's translation accuracy and success

Supervisor: K. Sornalakshmi, Assistant Professor, Department of Data Science And Business Systems, SRMIST

INTERNSHIP

AI - ML Virtual Internship

2023

- Engaged in a comprehensive AI-ML virtual internship, gaining invaluable insights into cutting-edge technologies and cloud services. Acquired practical expertise in utilizing AWS cloud services, including EC2, S3, RDS, Lambda, and more, for various machine learning applications.
- Successfully completed hands-on labs and exercises, enhancing proficiency in deploying, managing, and optimizing AI-ML solutions on AWS.
- Developed a strong foundation in architectural best practices, aligning with the AWS Well-Architected Framework. Focused on ensuring security, performance, and cost optimization in cloud-based projects.
- Gained practical experience in cloud infrastructure provisioning, monitoring, and automation, utilizing AWS Management Console and AWS CLI.
- Leveraged these newfound skills to contribute effectively to real-world AI-ML projects, demonstrating a high level of competence in cloud-based machine-learning solutions.
- This immersive virtual internship provided a platform to explore, experiment, and apply the latest advancements in AI-ML and cloud computing, fostering continuous growth and expertise in the field.

PROJECTS

Fashion Outfit Generator using Generative AI

In Progress

- Employed Generative Adversarial Networks (GANs) to develop a cutting-edge Fashion Outfit Generator capable of creating diverse and realistic clothing ensembles. Leveraged the Fashion MNIST dataset, a curated collection of fashion-related images, as the foundation for model training and generation.
- Successfully implemented GAN architecture, fostering the generation of clothing items, outfits, and fashion concepts.
- This innovative project serves as a testament to the application of AI in the fashion industry, offering a groundbreaking approach to outfit design and inspiration.

License Plate Recognition System

Completed

- Developed and led the implementation of a cutting-edge License Plate Recognition System using state-of-the-art techniques in computer vision and deep learning. This system achieved precise and efficient identification of license plate characters, contributing to enhanced security and automation in various applications.
- Employed YOLOv4 (You Only Look Once) deep learning architecture to accurately detect license plates within images and video streams. Integrated Optical Character Recognition (OCR) technology to extract and decipher alphanumeric characters from detected plates.
- Designed a robust and scalable system capable of recognizing license plates under diverse lighting conditions and angles, achieving high accuracy rates.
- The License Plate Recognition System has proven instrumental in bolstering security and streamlining processes in areas such as traffic management, parking facilities, and access control.

Heart Stroke Prediction System

Completed

- Led the development of a predictive model for early detection of heart strokes, leveraging the power of supervised learning techniques, particularly Linear Regression. This project aimed to enhance healthcare decision-making by identifying potential risk factors and providing early warning signs of heart strokes.
- Utilized Linear Regression, a powerful supervised learning algorithm, to analyze and model the relationships between various health-related features and the likelihood of heart strokes.
- Evaluated and fine-tuned the model's performance through rigorous cross-validation techniques and statistical measures, ensuring reliable predictions.

Page Replacement Simulation

Completed

- Designed and implemented a comprehensive simulation framework that emulated the behavior of memory pages, including allocation, eviction, and page fault handling.
- Conducted in-depth analysis and comparison of prominent page replacement algorithms, such as LRU (Least Recently Used), FIFO (First-In-First-Out), and Optimal, within the simulated environment.
- Leveraged statistical analysis and performance metrics to assess the efficiency, throughput, and resource utilization of each page replacement algorithm under diverse workloads.
- The OS Page Replacement Simulation project provides valuable insights into memory management strategies and their implications on system performance. The ability to evaluate and compare various page replacement algorithms equips OS developers and administrators with the knowledge to optimize memory utilization and enhance system efficiency.

CAMPUS ACTIVITIES

Data Science Community SRM

Technical Supervisor

2022 - present

Chennai, Tamil Nadu

- As a dedicated Technical Supervisor within the community, I've demonstrated exceptional leadership and project management skills while overseeing AI/ML subdomains. My primary area of expertise lies in Machine Learning and Artificial Intelligence, where I've guided the team towards collaboration, streamlined processes, and transparent communication.
- My role as a Technical Supervisor has been instrumental in nurturing our thriving technology-driven student-led community. I've spearheaded real-time projects, hosted events, and facilitated workshops, all while keeping a pulse on the latest industry trends. My specialization in Data science has significantly contributed to our community's technical growth.
- Additionally, I've played a pivotal role as an organizing committee member for NeuRes 2.0, highlighting my unwavering commitment to knowledge exchange and professional growth within the data science community. My expertise in Machine Learning and AI has been crucial in coordinating diverse AI-related topics and fostering a culture of education and collaboration.

IEEE Student Chapter

Technical Associate

2023

Chennai, Tamil Nadu

- Conducted knowledge transfer sessions on machine learning topics to students.

- I faced the challenge of learning new machine learning technologies while also teaching them to others. I overcame this challenge by setting aside time each day to study and practice. I also made sure to get feedback from my peers and mentors on my teaching methods.
- I developed teamwork skills by working with other members of the IEEE Student Chapter on various projects. I learned how to communicate effectively, share ideas, and collaborate toward a common goal.

Directorate Of Student Affairs

2022 - Present

Operations

- Successfully managed and coordinated operations for the prestigious MILAN23 cultural fest.
- Overseeing a diverse portfolio of over 100+ events, ensuring seamless execution and adherence to schedules.
- Collaborated with cross-functional teams to ensure efficient resource allocation, logistics, and event coordination.

HONORS AND AWARDS

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| • Reached 2nd Level of FlipKart Grid 5.0 Software Development Track | August 2023 |
| • Awarded with Best Research Project from Data Science Community SRM | July 2023 |
| • Received Certificate of Competency for Fundamentals of Deep Learning by NVIDIA DLI | 2023 |
| • Received Certificate of Competency for Web Page Development | 2022 |
| • Recieved Certificate of Organising Proof of Community in collabration with DSCommunity | 2022 |

TECHNICAL SKILLS

Languages	Python, C, C++
ML Framework	Scikit, TensorFlow, Pytorch, Keras, OpenCV
Database	SQL
Tools	Hadoop, git, Django, Flask
Visualization	PowerBi, Excel

LICENSE & CERTIFICATION

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| • Introduction to Deep Learning by Nvidia | 2023 |
| • AWS Academy Graduate - AWS Academy Cloud Foundations | 2023 |
| • AWS Academy Graduate - AWS Academy Machine Learning Foundations | 2023 |
| • The Structured Query Language (SQL) - University of Colorado Boulder | 2023 |

PROFESSIONAL AFFLIATION

Member of Association of Computer Machinery(ACM)	2023
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VOLUNTEER EXPERIENCE

- Volunteering in NGO

19/06/2023 - 30/06/2023
- Devoted time and effort to volunteer with JCI Nagpur Shakti NGO, actively contributing to various initiatives aimed at driving positive social change.
 - Played a pivotal role in organizing and executing events that focused on critical issues such as education, healthcare, women’s empowerment, and environmental sustainability.
 - Collaborated with a diverse team of volunteers, fostering an environment of cooperation and empathy to address local community challenges effectively.
 - Spearheaded and supported initiatives that directly impacted the lives of underprivileged individuals, emphasizing the importance of giving back to society.
 - Actively engaged in activities that promoted social justice, equality, and the overall well-being of marginalized communities. Through volunteer work with JCI Nagpur Shakti NGO, contributed to creating a more inclusive and compassionate society, leaving a positive imprint on the community.