NIKHIL SHARMA

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Education

SRM Institute of Science and Technology, B.Tech in Computer Science and Engineering
Sept 2022 – 2026

- GPA: 9.06
- **Coursework:** Computer Architecture, Artificial Intelligence, Data Structures And Algorithms, Design and Analysis of Algorithms, DataBase Management System, Machine Learning, Computer Networks, Scripting and Application Development, Essential in CLoud and DevOps.

Projects

Quizbuddy: Machine Learning Based Quiz Generation Application

- Developed a machine learning-based web app to generate quiz questions from user-provided paragraphs or PDFs as a module of the SRM Humanoid project.
- Implemented and evaluated models like T5 tokenizer, GPT-Neo, GPT-3, and LLaMA-2 7B for question generation. Built a user-friendly website enabling seamless input of text or documents for question creation.
- Skills Utilized: Web Scraping: Collected initial training data for the models. Data Preprocessing: Cleaned and structured scraped data to ensure high-quality inputs for training. Model Fine-Tuning: Currently fine-tuning LLaMA-2 7B for domain-specific question generation in DSA and other computing subjects.

Research Experience

Quantum-Driven Emergence: Computational Modeling and Machine Learning of Indeterministic Dynamics Across Biological Scales
(In Progress)

- Analyzed energy transfer in the FMO complex, comparing classical and quantum transport mechanisms.
- Studied geometrical properties (C3 symmetry, convex pigment hulls) and environmental noise impacts on energy optimization. Simulated quantum vs. classical energy transfer processes, integrating insights from key quantum biology studies.

Detection of Alzheimer's From MRI Scans Using Deep Learning Techniques

- This paper employed Convolutional Neural Networks (CNNs) to detect Alzheimer's disease from MRI brain scans, ensuring uniform data preprocessing and rigorous model evaluation.
- The trained CNN model showcased promising accuracy and performance in accurately classifying MRI images into distinct Alzheimer's disease categories, underscoring its potential for early diagnosis and treatment planning.
- Published at ARIIA 2024 IEEE Conference

Certifications

ServiceNow Certified System Administrator

Oracle Cloud Infrastructure 2023 Foundations Associate

Summer Training Program On Machine Learning IIT KANPUR

AWS Academy Machine Learning Foundation

Data Base Management System - NPTEL

Skills

Programming Languages: C++, C, Python, SQL

Frameworks/Platforms: Django, Flask, PySpark, ServiceNow Platform

Data Visualization Tools: Tableau, Power BI, Microsoft Excel

Technologies/Tools: MongoDB, Amazon Cloud Services, Snowflake

Libraries: NumPy, Pandas, Matplotlib, Seaborn, SciKit-Learn, TensorFlow, PyTorch, OpenCV

Soft Skills: Team collaboration, Attention to detail, Problem-solving, and Time management

Achivements

Publications

Research paper "Detection of Alzheimer's From MRI Scans Using Deep Learning Techniques" published at the IEEE ARIIA 2024 Conference.

Project Letter

Successfully completed two major machine learning projects at IIT Kanpur's prestigious EICT Academy, delivering high-performance models for airline customer satisfaction prediction and video game sales forecasting.

F1nalyze - Formula 1 Datathon

We were in the TOP 10 in the F1 Datathon Competetion organized by IEEE MUJ. We created a very efficient model implement XG BOOST and LightGBM.