Abhinav Reddy

B.Tech in Data Science & Artificial Intelligence, IIIT Sri City

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PROFESSIONAL SUMMARY

Second-year undergraduate in Data Science and Artificial Intelligence at IIIT Sri City with a strong focus on machine learning, graph neural networks, and generative AI. Passionate about research-driven innovation in healthcare, neuroscience, and intelligent systems. Experienced in implementing end-to-end ML/DL pipelines, authoring technical reports, and collaborating with faculty on cutting-edge projects.

EDUCATION

IIIT Sri City, India   2023 – Present
B.Tech in Data Science & Artificial Intelligence
- Roll Number: S20230030379
- Relevant Coursework: Data Structures, Algorithms, Deep Learning, Cloud Computing, Networking

RESEARCH INTERESTS

Graph Neural Networks, Motif Extraction, Deep Learning in Neuroscience, Generative Models, Federated Learning, Cloud Systems and Intelligent Automation

PROJECTS & RESEARCH

- **SMS Classification using SVM** – Developed ML pipeline for spam/ham classification.

- **Tree Data Structures (C)** – Implemented B+ Tree, Red-Black Tree, and 2-4 Tree using array-based design.

- **Java College Application System** – Admission, enrollment, and faculty assignment management.

- **Neural Networks for Plant Disease Detection** – Designed multi-layer NN for agricultural disease classification.

- **Deep Learning in Neuroscience** – Authored 12-page technical report on AI applications in brain science.

- **Deepfake Talking Head Generator** – Built Autoencoder + GAN architecture for video synthesis (Colab/Kaggle).

- **Graph Neural Networks Presentation** – Delivered academic seminar on node features, kernels, and embeddings.

- **Hierarchical Molecular Graph Generation** – Drafted research paper on motif-based graph generation.

- **Dynamic Motif Extraction with Graph Cellular Automata** – Current ongoing research focus.

FACULTY COLLABORATION

Worked with multiple professors at IIIT Sri City on diverse AI domains:

- **Dr. Amilpur Santhosh** – Cancer subtype classification using Graph Neural Networks. Explored structure-aware learning for healthcare applications.

- **Dr. Abhishek Hazra** – Federated Learning for UAVs. Focused on privacy-preserving distributed intelligence at the edge.

- **Dr. Annushree Bablani** – Medical Sentiment Analysis. Investigated NLP-driven approaches for analyzing patient perspectives.

- **Dr. Rajendra Prasath** – Sequential Recommendation using LLMs. Studied large-scale recommendation pipelines leveraging latent relations.

Technical Skills

Programming C, Java, Python, SQL
Frameworks TensorFlow, Keras, scikit-learn, PyTorch (basic), OpenCV
Tools Google Colab, Kaggle, IntelliJ IDEA, Git
Domains Deep Learning, Graph AI, Generative Models, Cloud Systems

Achievements

- Presented academic work on Graph Neural Networks in a structured seminar.

- Authored multiple detailed technical reports on AI applications in plant disease detection and neuroscience.

- Independently developed ML/DL projects spanning NLP, vision, and structural biology.

- Selected research priorities in GNNs, Federated Learning, Sentiment Analysis, and Recommendation Systems under faculty mentorship.

Interests

Artificial Intelligence research, cloud computing and distributed systems, scientific writing, problem-solving through coding challenges, creative pursuits such as sketching and reading, appreciation of global culture through anime and music, and aquarium fishkeeping as a practice in observation and care.