Sai Chakradhar Induvasi

Evanston, Illinois, 60201 | saiinduvasi2025@u.northwestern.edu | www.linkedin.com/in/isaichakradhar

EDUCATION

Northwestern University, Evanston, IL — ***Expected Graduation: Dec'24***
Master of Science in Artificial Intelligence (MSAI), GPA: 4.00

Sir M Visvesvaraya Institute of Technology, Bangalore, India — ***Aug'21***
Bachelor of Technology in Electronics and Communication (ECE)

WORK EXPERIENCE

Python Developer*, Tata Consultancy Services (TCS), Bengaluru, India** — ***Sep'21 – June'23

- Led a transformative project journey, steering it from a fledgling Minimum Viable Product to a robust, large-scale business testing phase.
- Directed the enhancement of security systems, orchestrating user authentication and authorization, token management, and dynamic API integration, while deeply exploring and implementing security standards using tools like OKTA and Cloudflare to strengthen digital security infrastructure.
- Developed a dynamic suite of Flask-based RESTful APIs for the front-end, optimizing system interaction and functionality.
- Innovated a comprehensive logging infrastructure independently, seamlessly bridging the frontend and backend of our website for a panoramic view of operations.
- Drove innovation with Azure Durable Function, Cosmos DB, Key Vault, and App Insights for heightened project impact.

Data Science Intern*, Verzeo Software, Bengaluru, India** — ***Oct-Dec'20

- Assessed and evaluated the accuracy of diverse algorithms for heart disease detection based on multiple factors such as age, gender, blood pressure levels etc.
- Orchestrated data pre-processing and applied MinMaxScaler for standardization. Conducted binary classification using machine learning techniques such as Linear Regression, Support Vector Machine, and Random Forest techniques.
- Demonstrated exceptional proficiency by attaining a remarkable 98% accuracy and f-1 score of 0.94.

PROJECTS

Nexus Brain

- Led development of Nexus Brain, an innovative research collaboration recommendation system for Northwestern University.
- Employed unsupervised machine learning algos like K-means clustering and Word2Vec/TF-IDF. Achieved an outstanding 85% accuracy in predicting associations.
- Compiled a comprehensive dataset of more than 7,000 professors, capturing detailed information such as research interests, published research papers, total citations, and more.
- Used Python's requests and Beautiful Soup library to scrape the data from Northwestern's University websites.

Epilepsy Detection — ***May-July'22***

- Spearheaded development of a cutting-edge Epilepsy seizure detection algorithm, a disease that impacts 50 million people globally.
- Engineered a sequential model employing Convolutional Neural Networks (CNNs) and Long Short-Term Memories (LSTMs) for efficient epilepsy detection using intracranial and surface electroencephalogram signals.
- Constructed a model with one-dimensional convolutional layer, two layers of LSTM, and three layers of dense networks. After rigorous testing, the Adam optimizer with a learning rate of 0.001 was chosen for its exceptional performance.
- Achieved an outstanding accuracy of 98.5%, surpassing all previously published models in Journals such as IEEE.

Smart Traffic with Object Detection — ***Sept-Oct'21***

- Developed a system which uses cameras and a microcontroller unit (MCU) to detect an ambulance when stuck in traffic.
- The system can identify ambulance by preprocessing images from cameras and running them through a deep learning model (Single Shot Multi-Box Detector).
- If the system detects an ambulance is stuck in traffic, traffic signal will automatically be changed to green to allow ambulance to pass and reach hospital in the shortest time possible.

TECHNICAL SKILLS

- Languages: C, C++, Python
- Deep Learning Frameworks: Tensorflow, Keras, Pytorch
- Machine Learning: Sklearn, Pandas, Spark
- Web Technologies: HTML5, Angular, Flask
- Database: MySQL, CosmosDB

ACHIEVEMENTS

- Stood second runner-up in a debate competition at Krupanidhi Group of Institutions, Bangalore, Feb'20
- Selected for second round of the Internet of Things Challenge conducted by the Indian Institute of Technology Bombay, Nov'19