Sathwik Reddy Chelemela

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EDUCATION

Northeastern University, Boston, United States   Sep 2023 - May 2025
Master of Science, Information Systems   GPA – 3.724
Courses: Generative AI, Natural Language Processing, Machine Learning, Database Management, Web Design and User experience

SRM University AP, Amaravati, India   Jun 2022
Bachelor of Technology in Electronics and Communication Engineering
Courses: Data Structure and Algorithms, Object Oriented Programming, Statistics and Probability Theory

WORK EXPERIENCE

Cognizant Technology Solutions, Hyderabad, India   May 2022 – Jun 2023
Data Analyst [Python, SQL, AWS, Power BI, Tableau]

- Orchestrated automated data pipelines using AWS and Apache Airflow, streamlining data processing tasks and reducing manual intervention by 70%.
- Developed and deployed machine learning models on AWS SageMaker, improving predictive accuracy for business insights and decision-making. Implemented real-time monitoring systems for data pipelines, tracking performance and ensuring data integrity   across cloud-based workflows.

High radius Technologies, Hyderabad, India   May 2021 – Sep 2021
Software Developer Intern [Python, MySQL, XML, React, MongoDB, Express, Node JS]

- Collaborated with the Advanced Robotics Process Automation team as a Software Developer Trainee, automating a website to mimic human-directed tasks, using Machine Learning and XML.
- Integrated Computer Vision technology and deployed an AI Enabled Fintech B2B Cloud Application during internship.
- Designed a full stack web-based product using appropriate data models and machine learning models along with relevant UI / UX components and backend design.

PROJECTS

Next-Gen AI Driven-Text-to-Video System (link)   Oct 2024 - Dec 2024

- Tech Stack: FastAPI, LangChain, Transformers, RAG, OpenAI API, ModelScope, TensorFlow, PyTorch, Runway AI
- Engineered a text-to-video pipeline leveraging RAG and fine-tuned transformer models, achieving a 30% boost in generation accuracy. Conducted comparative benchmarking of DALL-E and Model Scope for multi-modal synthesis, optimizing latent space representations for enhanced creativity. Designed and deployed RESTful APIs with FastAPI for SaaS integration, streamlining inference pipelines, and reducing content delivery latency by 20%.

Financial Risk and Loan Eligibility Prediction Platform (link)   Mar 2024 - Apr 2024

- Tech Stack: Streamlit, Flask, Keras, Pandas, Numpy, Scikit-Learn, Seaborn, SHAP
- Developed and trained machine learning models for financial risk assessment and loan eligibility prediction using essential data skills (data cleaning, feature engineering, data visualization) and frameworks (Pandas, Scikit-Learn, Streamlit). Utilized feature selection (VIF, OLS) and model interpretability techniques (SHAP) to optimize and explain predictions, creating a real-time web app for user-friendly access to predictions.

Web Development Project (link)   Sep 2023 - Dec 2023

- Designed an interactive website using MongoDB, Express, React.js, Node.js, Git and Hosted on Heroku.
- Implemented secure payment gateways using API and user authentication, ensuring data integrity and developed a robust backend system using Node.js and Express, improving site performance and reducing page load times by 30%.

Credit Card Fraud Detection using Deep Learning (link)   Jan 2022 - May 2022

- Built and trained a hybrid ensemble model for credit card fraud detection using Keras, TensorFlow, and Pandas. Combined machine learning (Random Forest, K-Nearest Neighbor) and deep learning (CNN, ANN) algorithms, incorporating NLP to detect fraudulent transactions in a credit card dataset.

TECHNICAL SKILLS

Languages: Python, R, C, C++, Java, Ruby, Golang, .net
Libraries: PyTorch, TensorFlow, Keras, Pandas, NLTK, Hugging Face, SpaCy, NumPy, SciPy
AWS Cloud: IAM, S3, EC2, AWS Lambda, DynamoDB, Sagemaker, Kinesis, Glue, API Gateway
Web Technologies: HTML, XML, CSS, JavaScript, TypeScript, React, Express.js, Node.js, Git, Angular, Django, Django Rest
Software/Tools: PowerBI, Tableau, Talend Open Studio, GitHub, MS Office, Excel, Docker, Alteryx, E/R Studio, Databases (MySQL, Informatica, SQL server, Oracle Database, MongoDB, NoSQL, PostgreSQL, Ruby on Rails, Snowflake)
Other Skills: ETL/ELT, Web Scraping, Exploratory Data Analysis, Dimensional Modeling, Data Warehousing, Data Engineering, Data Science, AI/ML, Kubernetes, DevOps, Agile, Git, CI/CD, Linux, shell scripting, Apache Spark