

# ROOP SAGAR MANGINENI

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## Education

### University of Illinois

*Master of Science in Computer Science*

**Aug 2023 – Present**

*Springfield, Illinois*

### SRM University

*Bachelor of Technology in Computer Science and Engineering*

**June 2019 – May 2023**

*Andhra Pradesh, India*

## Technical Skills

**Languages:** Python, C/C++, Java, HTML, CSS, JavaScript, SQL.

**AI & ML :** Machine Learning, Deep Learning, Image Processing, Natural Language Processing, Large Language Models, GenAI, Computer Vision, Time Series Analysis, Snowflake, OpenAI, LangChain, HuggingFace, MLOPS, MLFLOW.

**Relevant Libraries:** NumPy, OpenCV, Scikit- Learn, Matplotlib, keras, SpaCy, Tensorflow, NLTK, PyTorch.

**Technologies/Frameworks:** AWS, Github, Excel, PowerBI, Canvas, Bootstrap.

## Experience

### Accelerize 360

*Data Science Intern*

**May 2024 – Present**

*Dallas, Texas*

- Integrated Salesforce data with Snowflake, mapping various Salesforce data types to Snowflake-supported data types, and creating tables that accurately reflect this data. Utilized Retool for building internal tools and dashboards, streamlining data integration and analysis workflows, and improving operational efficiency.
- Developed and implemented data transformation processes to ensure accurate and efficient data transfer and storage in Snowflake. Created functions and scripts to transform raw Salesforce data into structured tables with appropriate data types for further analysis and reporting, enabling data-driven decision-making across the organization.

### SRM University

*Undergraduate Teaching Assistant*

**Sept 2022 – May 2023**

*Amaravathi, Andhra Pradesh*

- Collaborated closely with faculty members in the development and refinement of lesson plans, contributing innovative ideas and practical examples to enhance the effectiveness of the Python course curriculum.
- Delivered individualized assistance to students through regular office hours, addressing specific questions and offering guidance on assignments, thereby facilitating a collaborative and inclusive learning environment.

### Trainty Tech

*Data Science Intern*

**Aug 2021 – Nov 2021**

*Hyderabad, Telangana*

- Designed and implemented sophisticated analytical solutions, leveraging data insights to inform strategic decisions, and successfully briefed cross-functional teams on key findings, providing actionable suggestions to enhance business strategy.
- Utilized advanced Microsoft Excel features, including pivot tables, for efficient data analysis and reporting, streamlining processes, improving operational efficiency, and enhancing data-driven decision-making accuracy across the organization.

## Projects

### Automated Blog Generation with LLama 2 | [🐍 Python](#), [GenAI](#), [LangChain](#)

**November 2023**

- Led the development of an automated blog generation tool, seamlessly integrating the powerful LLama 2 language model. Implemented a user-friendly Streamlit interface, allowing effortless blog creation through customized prompts.
- Leveraged the dynamic capabilities of Prompt Templates within the LangChain framework, allowing users to tailor content for different writing styles, ranging from researchers and data scientists to the general public.

### Pneumonia Detection: CNN, VGG16, and ResNet | [🐍 Python](#), [Image Processing](#)

**November 2022**

- The proposed model is used to classify whether the person is affected by pneumonia using chest X-rays. Achieved a remarkable accuracy of around 91%, attesting to the model's reliability and effectiveness.
- Led a comprehensive study comparing Convolutional Neural Network (CNN), VGG16, and ResNet models for pneumonia detection, showcasing a deep understanding of diverse deep learning architectures and their applications.

### Analysis of Diseases based on symptoms | [🐍 Python](#), [Machine Learning](#)

**January 2021**

- Used Ensemble Process (Logistic Regression, Decision Tree, Random Forest, SVM, and Naive Bayes) to identify the disease based on the symptoms. Applied image preprocessing techniques to enhance the quality of chest X-ray images.
- Communicated findings, and effectively presented results using data visualization techniques. Two different kinds of self-created data sets were used to evaluate this model. Acquired an accuracy score of 97.62%.

### Credit Risk Modeling | [🐍 Python](#), [ML Pipeline](#), [Ensemble Learning](#)

**October 2020**

- Analyzed the Lending Club dataset from Kaggle with 2 million loan applicants, to construct a probability model.
- Extracted valuable information for strategic decision-making, product development, trend analysis, forecasting, and provided actionable insights, thereby effectively facilitating informed and strategic decision-making processes.