

Sripadam Sujith Sai

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Career Objective

Highly motivated student passionate about research-driven innovation, with a focus on harnessing the synergies between Chemical Engineering and Deep Learning. Committed to pioneering solutions that drive substantial change in our world. Keen interest and expertise in Human-Robot Interaction, Computer Vision, and Deep Learning. Dedicated to advancing the boundaries of technology to create a brighter and more interconnected future.

Education

National Institute of Technology , Rourkela

Rourkela, India

Bachelor of Technology in Chemical Engineering

Dec 2021 - Current

- Member of AIChE (American Institute of Chemical Engineers)
- Working as a Student Mentor
- **Courses:** Fluid dynamics, Thermodynamics, Deep Learning, Statistical Mathematics

Research

National Institute of Technology Rourkela

Rourkela, India

Face Detection For Humanoid Robot

Aug 2023 - Current

- Developed a CNN model that utilised YOLO as a foundation to improve the accuracy of face detection for a Humanoid Robot.
- Trained model on a custom dataset. Optimised the model to detect faces from the side view.
- Significantly boosted the model's accuracy by 40% compared to YOLOV5.
- **Technical Skills:** Python with PyTorch, Tensorflow, NumPy, Matplotlib, Pandas, Scikit-learn, C++.
- **Soft Skills:** Teamwork, Time Management, Communication, Presentation skills.

IIEST Shibpur (Collaboration)

Rourkela, India

Emotion Detection and Body language co-relation using ViViT

Jul 2023 - Current

- Developed a model that utilised YOLO as a foundation to improve the accuracy of face detection on Realtime.
- Optimised the model to detect faces from the side view. Augmented and labelled custom dataset and trained the model.
- Implemented Graph Neural Networks & Video Vision Transformers to analyse body language and motion.
- **Technical Skills:** Python with PyTorch, Tensorflow, NumPy, Matplotlib, Pandas, Scikit-learn, C++.
- **Soft Skills:** Teamwork, Time Management, Communication, Presentation skills.

National Institute of Technology Rourkela

Rourkela, India

Machine Learning Techniques in CO₂ capture and conversion to Cyclic Carbonates

Aug 2023 - Current

- Working on Deep learning techniques in Conversion of CO₂ to Cyclic Carbonates.
- Building a model to Simulate and automate the process of CO₂ capture , Solvent-Selection and design.
- Model takes the sensory inputs as data and outputs Pyrolysis rate, Mass loss, etc.
- **Technical Skills:** Python with PyTorch, Tensorflow, Chemical Reaction Engineering, NumPy, Matplotlib, Pandas, Scikit-learn, C++.
- **Soft Skills:** Teamwork, Time Management, Communication, Presentation skills.

Projects

Computer Vision Approach to Pneumonia Detection in Chest X-rays

Pneuma-Scope

July 2023

- Constructed a robust Convolutional Neural Network (CNN) model using Tensorflow for precise and reliable pneumonia prediction.
- Skillfully preprocessed a vast collection of 6000+ chest x-ray images, enhancing model training quality.
- Attained an exceptional training accuracy of 97%, showcasing the effectiveness of the CNN architecture.
- **Technical Skills:** Tensorflow, Matplotlib, Numpy, Pandas.

Advanced Handwritten Digit Recognition Using Convolutional Neural Networks

NeuroDigits

June 2023

- Constructed a Convolutional Neural Network (CNN) using TensorFlow for handwritten digit recognition.
- Trained the CNN model utilizing a dataset of over 40,000 images of handwritten digits.
- Attained an impressive training accuracy of 0.989, showcasing the effectiveness of the model.
- **Technical Skills:** Tensorflow, Matplotlib, Numpy, Pandas.

Membership of Professional Societies

American Institute of Chemical Engineers(AIChE) 2021-present

Skills

Programming	Python (Pandas, PyTorch, NumPy, Scikit-learn. etc.), Tensorflow, Keras, C/C++, HTML/CSS, JavaScript, React, Latex.
Softwares	Autocad, Figma
Miscellaneous	TeX(Overleaf/R Markdown), Microsoft Office, Git.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation.

Achievements

2023	Top 300/32000+ , Amazon ML Summer School	India
2022	Winner , Codes de Caza	India
2022	Top 2% , Codechef Starters 38	India
2022	Rank 3 , Chem-E-Jeopardy	India
2019	Winner , NSO-National Science Olympiad,School Level	India
2019	Finalist , Inspire - National Science Challenge	India
2021	Top 2% , JEE Mains	India

Courses and Specializations

SUPERVISED MACHINE LEARNING

Jun 2023

Stanford University | Coursera

- Build machine learning models in Python using popular machine learning libraries NumPy and scikit-learn
- Build and train supervised machine learning models for prediction and binary classification tasks, including linear regression and logistic regression
- **Technical Skills:** Python, NumPy, Matplotlib, Pandas, Scikit-learn.

DEEP LEARNING

Jul 2023

IBM | Coursera

- Built deep learning models in tensorflow and keras libraries
- Built and trained supervised deep learning model for classification
- **Technical Skills:** Python, Tensorflow, Keras, NumPy, Matplotlib, Pandas, Scikit-learn.

NEURAL NETWORKS & DEEP LEARNING

Jul 2023

DeepLearning.ai | Coursera

- Gained skills like Neural Network architecture , back propagation , gradient descent , pooling , convolutions .
- **Technical Skills:** Python, Tensorflow, Keras, NumPy, Matplotlib, Pandas, Scikit-learn.

Communities and Clubs

AIChE	Member of Technical team. Club focuses on technological advancements on Chemical Engineering
ML4E	Official Member of Data science club of NIT R.
Opencode	Member of Opensource and cybersecurity community of NIT R.

Links

LinkedIn:	sripadam-sujith-sai
Github:	SujithSaiSripadam
CodeChef:	Sujith
Kaggle:	Sujith04
Portfolio:	Sujith

Languages

English	Professional proficiency
Hindi	Native proficiency
Telugu	Native proficiency