

Siva Sankar Udaya Kumar

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EXPERIENCE

Norwegian University of Science and Technology

Oct 2021 – Nov 2024

PhD Candidate

Trondheim, Norway

- Developed and implemented a **multistage stochastic optimization model** using **Python** and **advanced algorithms** to optimize natural gas pipeline storage and improve **operational efficiency** under **uncertainty**.
- Designed **AI driven scenario generation** techniques leveraging **GANs** and **Reinforcement Learning** to enhance **predictive accuracy** and **computational efficiency** in large scale optimization problems.

Indian Institute of Technology, Bombay

Jul 2021 – Sep 2021

AI Researcher

Mumbai, India

- Developed an **end-to-end vehicle insurance cross-sell prediction system** using **Databricks**, **Apache Spark**, and **XGBoost**, with MLflow for experiment tracking and model performance optimization.
- Designed and deployed a **scalable REST API** for model inference, implementing **MLOps practices** with **Docker** and **Kubernetes** for automated deployment, monitoring, and scalability.

Relatas

Jan 2021 – June 2021

Data Scientist

Bangalore, India

- Developed a **Smart Opportunity Recommender** tool using **Python** and **scikit-learn**, incorporating **sentiment analysis** and **NLP** to identify high potential sales leads.
- Deployed models on **AWS** for scalability and performance, managing workflows with **Jira** in an **agile** environment.

Iha Consulting Services

Oct 2020 – Dec 2020

ML Engineer

Secunderabad, India

- Developed a **Human Activity Recognition model** using Ensemble Learning on multi sensor time series data, performing feature engineering and exploratory analysis to enhance predictive accuracy.
- Built an **end-to-end MLOps pipeline** for model training, versioning, deployment, and monitoring, integrating **CI/CD workflows** for production grade reliability.

iSmile Technologies

June 2020 – Sep 2020

AI Engineer

Bolingbrook, United States (Remote)

- Led a **team of three** in integrating Computer Vision and Robotics for autonomous object detection using a custom model built with **Azure Custom Vision**.
- Developed an **Android app** for real-time detection and coordinated delivery using **Azure DevOps** and **SAFe**, ensuring streamlined collaboration and project execution.

CodeSpeedy Technology

Apr 2020 – June 2020

AI Developer

Kolkata, India

- Developed a **hybrid BERT based text classifier** that fused textual embeddings with engineered numerical features using TensorFlow, improving accuracy over text only baselines.
- Designed and trained a **multimodal architecture** integrating structured metadata and unstructured text to classify web articles as evergreen or non-evergreen.

Quantel

Jan 2020 – Mar 2020

Data Science Intern

Delhi, India

- Developed a **real-time image and video processing pipeline** in Python using OpenCV and NumPy to automate dynamic blending and visual transformations.
- Designed **algorithmic solutions for pattern detection and metadata extraction** across numerical and visual data, strengthening foundations in multimodal data analysis.

EDUCATION

Norwegian University of Science and Technology

Oct 2021 (ABD)

Ph.D. in Industrial Economics and Technology Management

Trondheim, Norway

- Thesis: Short-Term Optimization under Uncertainty in the Norwegian Natural Gas System

Indian Institute of Technology (BHU), Varanasi

Jul 2019 – June 2021

M.Tech. in Industrial Management (GPA: 9.11)

Varanasi, India

- Thesis: Automated Detection and Tracking of Sewer Pipe Problems Using Inspection Videos

Jain University

Jul 2015 – June 2019

B.Tech. in Aerospace Engineering (GPA: 8.01)

Bangalore, India

TECHNICAL SKILLS

Programming Languages: Python, SQL, MATLAB, Julia

Platforms: Apache Airflow, Databricks, Azure Cloud, GCP, AWS, DevOps Tools - Git, GitLab, Jira, Terraform

Data Processing and Big Data: Apache Spark, Kafka, Docker, Kubernetes, Hive, BigQuery

ML & AI Frameworks: TensorFlow, Scikit-learn, PyTorch, XgBoost

Dashboarding & Spreadsheet: PowerBI, Data Studio, Tableau, MS Excel

Spoken Languages: Tamil, English, Norwegian, Hindi, Telugu, Kannada

KEY PROJECTS

Real-Time Stock Analytics Pipeline 🔄

- Developed a real-time data pipeline using **Kafka**, **Airflow**, **MinIO**, and **PostgreSQL** to ingest, store, and process live stock market data from the Finnhub API.
- Designed **Airflow DAGs** to compute volatility metrics (log returns, Sharpe ratio) and trigger alerts for anomalies such as price drops or abnormal volatility.
- Built a **Streamlit** dashboard for real-time monitoring with interactive visualizations of stock trends and alert events.