Siva Sankar Udaya Kumar

Trondheim, NO | +47-94712411 | cvakapoor.github.io | cvakapoor@gmail.com

Experience

Norwegian University of Science and Technology Oct 2024 – Nov 2024
PhD Candidate *Trondheim, Norway*

- Modeled and implemented a *Multistage Stochastic Linepack Optimization Model* (Gasslip) in Python, optimizing gas flow storage (linepack) based on market price uncertainty for improved efficiency and cost management.
- Developed a scenario generation method using *Generative Adversarial Networks* (GANs), leveraging deep learning for more accurate and efficient simulations in *Generative AI* applications.

Indian Institute of Technology, Bombay Jul 2021 – Sep 2021
Research Assistant *Mumbai, India*

- Developed a Human Activity Recognition model using Ensemble Learning Algorithm to predict actions from sensor data.
- Designed an ETL pipeline for data preprocessing and performed exploratory analysis to identify activity patterns.
- Deployed the model with Docker and managed scalability using Kubernetes.

Relatas Sep 2020 – Nov 2020
Artificial Intelligence Intern *Bangalore, India*

- Developed a Smart Opportunity Recommender tool using Python and Scikitlearn, leveraging sentiment analysis and NLP to identify promising sales leads. Deployed models on Azure Cloud for scalable infrastructure and performance.
- Managed tasks and tracked progress using Jira, following agile development practices.

iSmile Technologies June 2020 – Sep 2020
Data Scientist Intern *Secunderabad, India*

- Led a Robotic Vision project integrating Computer Vision and Robotics for autonomous object detection.
- Created a custom object detection model using Azure Custom Vision API, enhancing accuracy in real-time image processing. Developed an Android application for object detection using Android Studio.
- Utilized Azure DevOps for continuous integration and collaboration, ensuring efficient project execution within the Scaled Agile Framework (SAFe).

Education

Norwegian University of Science and Technology Oct 2021 – Nov 2024
Ph.D. in Stochastic Optimization *Trondheim, Norway*

- Field of Study: Industrial Economics and Technology Management
- 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

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

Projects

Real-Time Data Management with PostgreSQL and Kafka

- Developed a PostgreSQL database model for cities, airports, and airlines, focusing on the top ten busiest airports and top five airlines in India.
- Automated data pipelines using Apache Airflow and integrated Kafka for real-time updates and seamless data flow.

Enhanced BERT-Based Text Classification with Numerical Data Integration

- Developed an enhanced BERT-based text classification model integrating both textual and numerical data for improved accuracy.
- Extended traditional BERT by combining embeddings with numerical features using TensorFlow.