

Sohan Sanjeeva Puthran

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Data Scientist

Experienced Data Scientist skilled in developing and deploying machine learning models, with proficiency in Python and libraries like TensorFlow, PyTorch, and Keras. Demonstrated expertise in computer vision techniques and tools, including deep learning models for urban planning. Familiar with MLOps practices, implementing CI/CD pipelines and automated model testing and monitoring. Proficient in cloud platforms such as AWS and Azure, with hands-on experience in Airflow (Docker) for scalable model deployment. Proven success in automating machine learning workflows to enhance model accuracy and efficiency.

TECHNICAL SKILLS

- **Data Science / AI** : Deep Learning | Marketing Mix Modelling | LLMs | Computer Vision | NLP | Transfer Learning | Ensemble Learning | Web Scraping | Big Data
- **Machine Learning** : Recommendation System | Clustering | Regression | Classification | Reinforcement Learning | LSTM | Image Processing
- **Libraries** : Scikit-Learn | Pandas | NumPy | Streamlit | PyTorch | Tensorflow | Keras | PySpark | Flask | Hadoop
- **Languages** : Python | SQL | TypeScript | JavaScript | HTML5 | CSS3
- **Tools** : Snowflake | Airflow (Docker) | Power BI | Azure Data Factory | AWS Pipeline | Microsoft Excel | Git | VS Code

WORK EXPERIENCE

Lundbeck | Deerfield, IL

January 2022 – May 2024

Data Scientist

- Implemented MLOps practices by setting up CI/CD pipelines for continuous integration and deployment of models using Airflow (Docker), Snowflake, AWS Lambda and AWS SageMaker.
- Designed and deployed machine learning models to predict sales outcomes and optimize marketing strategies, achieving a 22% increase in profits.
- Utilized Python and machine learning libraries (TensorFlow, Keras) to develop deep learning models for time-series forecasting, improving model accuracy.
- Orchestrated machine learning workflows through AWS Lambda, streamlining model training and deployment, and reducing model turnaround time by 36%.
- Leveraged Snowflake and SQL to perform complex queries and data manipulations, resulting in more accurate and actionable insights for the sales and marketing teams.
- Developed an automated AWS SageMaker pipeline for data input, quality checks, and monthly sales suggestions, achieving an RMSE of 0.6 for high accuracy and reliability.

Airriva | Hilliard, OH

June 2021 – December 2021

Junior Data Scientist

- Generated an algorithm that analyzes occupancy data to identify changes in demand, allowing for timely detection of surges and increasing profits.
- Automated ETL processes & report generation using Azure Data Factory, ensuring timely and accurate data delivery.
- Developed a proprietary algorithm utilizing feature importance analysis to identify key amenities within each region, resulting in a 26% increase in profits.
- Leveraged PyTorch and TensorFlow for custom algorithm development, improving operational efficiency by optimizing key feature identification in pricing and occupancy predictions.
- Used Folium to create geospatial maps analyzing occupancy patterns across 4,500+ listings, enhancing understanding of regional dynamics.

Airriva | Hilliard, OH
Data Scientist Intern**October 2020 – May 2021**

- Created a robust price prediction model for over 4500 short-term rental listings, achieving an impressive Root Mean Square Error (RMSE) value of 0.17.
- Enhanced pricing engine accuracy by 20% through the derivation and integration of novel data points aligned with current market trends.
- Architected and deployed an Azure Machine Learning pipeline to identify critical features impacting price and occupancy, enhancing data-driven decision-making processes.
- Designed and deployed a surge detector leveraging quadratic regression analysis to predict optimal pricing surges, resulting in a 30% increase in profits through timely price adjustments.
- Deployed machine learning models and data pipelines using Azure and Python, achieving high accuracy in predictions and reducing processing times by 42%.

Plexus365 | Bengaluru, India
Junior Software Engineer**September 2017 – June 2018**

- Executed responsibilities as a full-stack developer for the Plexus365 website, utilizing Angular 5 and the .NET Core framework to deliver comprehensive functionality and seamless user experiences.
- Built a mobile application for a client using Ionic 3 framework for front-end development and .NET Core framework for back-end functionality.
- Managed integration of Google Maps APIs and facilitated full stack development while meticulously conducting and executing comprehensive test cases.

PRO BONO PROJECT EXPERIENCE**Building an AI Solution for Optimization of Distributed Energy Resources | Omdena****Lead Machine Learning Engineer****November 2021 – December 2021**

- Led a volunteer initiative, directing a team of AI enthusiasts to develop pioneering solutions using computer vision techniques for Rooftop Detection and Obstacle Detection tasks, fostering collaboration and innovation.
- Generated a specialized dataset by meticulously annotating rooftop obstacles, facilitating the development of accurate obstacle detection models.
- Deployed an innovative suite of deep learning models for precise Rooftop and Obstacle Detection, utilized by over 15 team members to improve project efficiency and accuracy in urban planning applications.

Preventing the Financing of Terrorism by Engineering an ML Model with Financial Crime Data | Omdena**Lead Machine Learning Engineer****June 2021 – July 2021**

- Collaborated with a global team to develop and deploy models for detecting the financing of terrorism, winning first place in the United Nations' 'Unite Ideas' Challenge.
- Integrated and synthesized disparate datasets, consolidating insights through the creation of diverse graphical representations for comprehensive data analysis.
- Built a user-friendly Streamlit web application to deploy machine learning models and present data analysis results, improving accessibility and decision-making.

EDUCATION**Master of Data Science (2019-21)**
Illinois Institute of Technology | Chicago, IL**Bachelor of Engineering (BEng) in Computer Science and Engineering (2013-17)**
Visvesvaraya Technological University | Belgaum, India