Shyam Sundar Rampalli

Data Scientist

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Date of birth: Nov 3rd, 1994
German Work Permit: Yes, from Dec 1 2024

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Medium:
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Github:
https://github.com/rampallishyam

Professional Profile

Passionate Data Scientist with 4+ years of experience in machine learning, transportation and technical consulting. Strong Python development skills combined with the ability to analyze complex data. Extensive experience in machine learning model training, data analysis, and simulation. Looking to apply my data science and machine learning expertise to drive innovative solutions for the data science role at your company.

Work Experience

06/2024 – Present

Research Engineer – Machine Learning
Universite Gustave Eiffel – https://www.univ-gustave-eiffel.fr/
Lyon, France.

- Trained, tested and developed a ML algorithm for predicting trajectories using Long- and Short-Term Memory (LSTM) units using Keras and sci-kit learn.

11/2022 – 02/2024

Assistant Manager – Data Science
Bosch Limited – www.bosch.in
Bangalore, India

Develop, test and implement data driven solutions for transport data. Engage closely with clients, government agencies and customers about developed solutions and develop a business case.

- Trained ML model with 10000+ images of different vehicle types using the IDD Dataset. The trained model along with ultralytics and ByteTrack was used for traffic vehicle counts and traffic violation detection.
- Trained 5000+ images for both license plates and faces. Combined torch with openCV and ultralytics to mask faces and license plates.
- Implemented genetic algorithm for automatic parameter calibration. Improved the model development time from 5 weeks to 1 week.

09/2021 – 10/2022	**Traffic Engineer**
	TUM Asia - https://tum-asia.edu.sg/
	Singapore

Analyse and develop a model to simulate real traffic situation and realize future scenarios with autonomous vehicles to evaluate the impact.

- Processed camera data of 11 locations and created dashboards for each location using Plotly and matplotlib for automatic insight generation.
- Led a team of 4 towards the development of traffic simulation model for understanding and modelling autonomous vehicles.
- Published at an international conference on my findings of implementing unsupervised clustering on GPS data.

10/2019 – 09/2021	**Research Associate**
	Nanyang Technological University – www.ntu.edu.sg
	Singapore

- Analyzed GPS data of a bike sharing service using Plotly and matplotlib and improved the average usage time by 18% and average trip duration by 12%.
- Modelled and simulation autonomous vehicles both at driver level and at a traffic level. Observed about 15-20% impact on travel time based on the type of strategy implemented.
- Published at 1 international Conference and 2 book chapters.

Education

07/2017 – 06/2019	Master of Science
	Technical University of Munich
	Munich, Germany
	Graduated with Merit

08/2012 – 06/2016	Bachelor of Technology
	National Institute of Technology Patna
	Patna, India

Additional Skills

Languages
- English (C2), German (B1), Telugu (Native), Hindi (B1)

IT-Skills
- **Advanced Knowledge:** PyTorch, sci-kit learn, numpy, matplotlib, plotly, pandas
- **Intermediate:** AWS, LaTeX, SQL, openCV, yolo, osmnx, Keras
- **Basic:** C++, R, BeautifulSoup, networkx

2nd August, 2024
Shyam Sundar