MALYAJ MISHRA

Data Scientist

A Data Science professional with experience as a Machine Learning & Python Developer-intern at General Motors(GM); certified proficiency in developing ML models for diverse use-cases using NLP, Computer Vision and Time Series among others & competent in data analytics extracting valuable business insights; seeking a data scientist position with opportunities to solve complex real-world problems.

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WORK EXPERIENCE

Machine Learning & Data Analytics-Intern
General Motors(GM) Technical Research Centre

Bengaluru, India

Achievements/Tasks

- Developed a machine learning model for Car-Rating Prediction based on its present condition using **General Motors(GM) cars dataset**; performed Hyperparameter tuning using **Optuna**; and achieved an **adjusted R2 score=0.82.**
- Automated the GM Vehicle 'Noise, Vibration and Harshness**(NVH)' analysis** process using python, **reducing the number of physical inputs from 4 to zero.**
- Appended HyperWorks (vehicle NVH optimization tool) with the NVH assessment process; **decreasing** the full vehicle **optimization time from 72 hours to 20 hours.**
- Established pipeline to automatically extract, segregate and publish vehicle NVH performance analysis reports using Tcl/Tk, hence **reducing overall manual intervention by 75%.**

Python Developer & Vehicle Efficiency-Intern
SUPRA SAE IIITDMJ Racing

Noida, India

Achievements/Tasks

- Carried out strength and performance analysis of 'Double wishbone suspension system' using **past ~3 years data of SUPRA SAE Formula Student cars**; enhancing overall vehicle dynamics system **performance by ~33%** compared to the last car model.
- Integrated & automated vehicle parts designing tool(SolidWorks) & analysis tool(ANSYS) using python; **minimizing suspension system designing & analysis time by ~50%.**
- Ideated and implemented a modified version of the Ackermann principle for **steering optimization** of racing cars, considering the competition's **racing track metrics** (Buddh International Circuit-BIC, Noida). This modification **decreased the driver's escape time by ~4 seconds.**

EDUCATION

B.Tech
Indian Institute of Information Technology(IIIT) Jabalpur

2016 - 2020 *Jabalpur, M.P. || CPI=7.9*

Senior Secondary
Kendriya Vidyalaya Satna M.P.

2014 - 2015 *91.2% (CBSE Board)*

Higher Secondary
Kendriya Vidyalaya Satna M.P.

2012 - 2013 *10 CGPA (CBSE Board)*

SKILLS

Data Science & Machine Learning | Data Analytics | Python | SQL | Deep Learning | C++ | MS Excel | HyperWorks | MATLAB | Streamlit | Tableau

ACHIEVEMENTS

Indian Youth Ambassador to Japan - JENESYS 2018

One of the 20 students *selected from across the country to* ***represent India in Japan*** *under the JENESYS- 2018 Techo-Cultural program.* (Link)

Secured 96th rank out of 8195 participants in the Capgemini Data Science Challenge.

Winner: ROBO-WAR, Inter-IIIT Techno-Cultural Fest 2017

Coordinator - Event Management-ABHIKALPAN 2018 (Annual Tech-Fest, IIIT Jabalpur)

Gold Medallist (Football) - Inter IIIT Sports Meet 2020

National-level Debate and Elocution Finalist (Interscholastic) & Student Editor - Annual School Magazine (2013-14)

PROJECTS

Street-Sign Object Detection and Masking using Detectron2

- Street sign & advertisement **object detection & instance segmentation** on images & videos using Computer Vision library **Detectron2** achieving maP of ~90%. **(Link)**

ARIMA Forecasting Model for Time Series

- Forecasted **stock price of HCL** using stationary time series with **ARIMA** model where parameters were determined using autocorrelation(ACF) and partial autocorrelation(PACF) plots; **achieving Root mean squared percentage error(RMSPE) = 6.2%. (Link)**

Amazon products review sentiment analysis (NLP)

- Performed multi-text classification over an Amazon review dataset of **~3.65 million review samples** using **BI-LSTM** and text preprocessing achieving model **accuracy=87.34%. (Link)**

Bank customer deposit subscription classification

- Developed a classification model to predict whether a customer will opt for a subscription or not using a **Portuguese Bank dataset**. Finally achieving **F1 score(test data)=0.83** and Accuracy(test data)=82%. **(Link)**

CERTIFICATES

Data Scientist Career Track (Data Camp)

Machine Learning Specialization (Coursera)

Python For MATLAB Users (Data Camp)

SUPRA SAEINDIA (Maruti Suzuki)