

EDUCATION

PROGRAM	INSTITUTION	%/CGPA	YEAR OF COMPLETION
B. Tech in Mechanical Engineering and MTech in Data Science	Indian Institute Of Technology, Madras	9.44	2021
Standard XII (BIE, Andhra Pradesh)	Narayana Junior College, Vijayawada	98.7	2016
Standard X (SSC, Andhra Pradesh)	Huzurnagar High School, Kodad	9.8/10	2014

SCHOLASTIC ACHIEVEMENTS

- Selected for GARTNER LEADIT Rotational Program, one among 500 students globally. (2019)
- One among the top 30 students selected for Inter Disciplinary Dual Degree (IDDD) in Data Science on a meritorious basis. (2019)
- Secured a rank in the top **0.8%** in the IIT-JEE Advanced Examination out of **2,00,000** qualified students. (Rank 1636) (2016)
- Secured a rank of **661** in the JEE Mains Examination conducted by CBSE out of 15,00,000 students in India. (2016)
- Secured a rank of **228** in the state level engineering entrance examination (**AP-EAMCET**) out of 5,00,000 students. (2016)

COURSES

Mathematical Foundations in Data Science	Multi-Variate Data Analysis	Inverse Methods In Heat Transfer
Probability, Statistics and Stochastic Process	Fundamentals Of Operation Research	Deep Learning ^[1]
Natural Language Processing ^[1]	Prognostics & Health Management of Machine Tools	TensorFlow 2.0 Practical ^[2]
Data Structures & Algorithms	Design & Optimization of Energy Systems	Introduction to Data Analytics
Data Analytics Laboratory	Feature Engineering for ML ^[2]	Sequence Models ^[2]

SKILL SET

LANGUAGES
ML PACKAGES

C++, Python, MySQL
TensorFlow 2.0, Pytorch, Spacy, NLTK

PROFESSIONAL EXPERIENCE

DATA SCIENTIST INTERNSHIP @ GYAN DATA (May – July 2019)

FURNACE LOADING PROBLEM - SCHEDULING PROBLEM @ CUMI	Guided by Prof. Ragunathan Rengaswamy (Dept. of Chemical Engineering, IIT Madras) Packages: CasADi, PuLP, Scipy, NetworkX Solvers: Couenne, Bonmin, CBC, GLPK <ul style="list-style-type: none">The problem involved efficient packing of hollow cylinders in a given 3 dimensional furnace.The project constituted of three different problems namely nesting, layer loading and basket loading problems. The above solvers were used to get the global optimal solution.Proposed the idea of multi-level nesting and implemented it using graph theory in their manufacturing process. Was able to increase the furnace efficiency by 30%.
ETA AND FUEL MODELLING IN SEA NAVIGATION @NAVIDIUM	Guided by Prof. Shankar Narsimhan (Dept. of Chemical Engineering, IIT Madras) Packages: Sklearn, Ipyleaflets(Geomaps), Sqlite3, Seaborn, Pandas, Numpy <ul style="list-style-type: none">The problem involved building ETA and Fuel Model using forecasted weather data.Built an energy consumption model based on regularised polynomial regression with 10 features, Ideal Velocity, wind Speed & direction, course over ground, weight, ship draft, RPM.Built an ETA model (vector) based on RPM, slip, wind & ocean velocity, course over ground.Achieved a max.& min. error of 0.7% & 0.2 % for the fuel model & 5% error in ETA model.

Hackathons & Projects

Grocery Sales Prediction @Machine Hack	<ul style="list-style-type: none">One of the Top 5 contestants in this hackathon (Rank 4). This hackathon is about predicting future sales based on the past sales.Converted a time series to stationary model and built a robust model which is stacked model of Lightgbm, Xgboost, Bayesian, Random forest with Extra trees as Meta model.
Janta Hack Mobility Analytics @Analytics Vidhya	<ul style="list-style-type: none">One of the Top 50 contestants in this hackathon (Rank 37). This hackathon is about prediction surging price type based on customer behaviour with that particular cab company.Quite challenging because of lot of missing values in the datasets and given features are not helpful. So manually feature engineered and built a strong cross validated LGBM model.
Machine Learning for Banking @Analytics Vidhya	<ul style="list-style-type: none">One of the Top 200 contestants in this hackathon (Rank 157 / 8086). This hackathon is to predict whether a customer his/her defaults. This model can be used for risk prevention and detectionThis hackathon gave me a good experience in feature engineering with lot of modelling techniques. Finally built various models using Pycaret classification package.
Fashion MNIST Dataset @Projects	<ul style="list-style-type: none">Fashion MNIST dataset of Zalando's article images. This is a multi-class classification problem.Built a ResNet CNN model and achieved an accuracy of close to 91%.This was the best model among the deep learning folks in the deep learning IITM course.

All my hackathons participations, models, Personal projects, case study competitions ideas can be found in the following GitHub repository. <https://github.com/DurgaSandeep25>

[1] Ongoing course [2] Online Course

POSITIONS OF RESPONSIBILITY

DEPUTY PLACEMENT COORDINATOR – PLACEMENT TEAM, IIT MADRAS	(Apr, 2018- Feb, 2019)
<ul style="list-style-type: none">Organised campus placement drive for all the pre-final year students in Mechanical Engineering department of IIT Madras.Confirmed over 30 companies for the campus placement season 2018.Coordinated and planned the campus placement process of over 20 students from the department of Mechanical Engineering.Coordinated with over 10 companies during the campus placement season.	

EXTRA-CURRICULAR ACTIVITIES

- Awarded bronze medal in Inter – Hostel Volleyball tournament and was runner-up for the award of best player of the tournament.
- Represented IIT Madras for the Institute Sports Fest with over 8 Universities participating from all over the state.
- Represented IIT Madras in the Jimmy George National Volleyball Tournament with over 16 teams participating from all over India.
- Awarded silver medal for securing runner-up place in the Freshie Schroeter Volleyball Tournament.

[1] Shaastra is the ISO certified annual technical festival of IIT Madras.