REBBA PRAGADA SURYAKIRAN

ACADEMIC QUALIFICATIONS

Year	Degree /Board	University /Institution	%/CGPA
2025*	Post Graduate Diploma in Business Analytics	IIM Calcutta, IIT Kharagpur, ISI Kolkata	-
2020	B.Tech Mechanical engineering (computer science minors)	NIT Trichy	8.71/10
2016	CLASS XII	DAV Boys School, Gopalapuram Chennai	96.6 %
2014	CLASS X	Kendriya Vidyalaya AFS Thanjavur	10/10

KEY SKILLS/TOOLS	Predictive Modeling, Statistical Inference, SQL, R, C++, Python, Excel, Tableau

WORK EXPERIENCE (30 Months)

Bajaj Auto Limited	Assistant manager (R&D)	Pune (Jan '21 - Jul '23)

Responsibilities & Deliverables	■ Led a team of three technical executives, two diploma trainees and mentored two graduate trainee engineers ■ **Coordinated** b/w **designers**, **plant & testing** teams to ensure successful development of **KTM bike engines** ■ Developed test plans, managed **engine prototype**, **pilot** & **SOP** batch builds, resolved all **DFA**, **DFM** concerns
Initiatives	■ Successfully delivered **10+ SKUs** , achieved **10% reduction** in Newgen engine dry **weight** by **benchmarking** ■ Solely responsible for **Duke 200 Low-Cost** project & successfully **released MPL** ahead of planned **schedule** ■ Addressed **quality** issues, implemented **VAVE's** in existing projects, resulting in total savings **~ 1.1cr/annum**
Automations	■ **Streamlined** the selection **process** of applicable model codes in **EC text**, resulted in **time savings** of **~ 15%** ■ Made **excel dashboards** for comparison of different **engine performances** and make data backed decisions ■ **Automated** the process of **3D** common part replacement in **NX** ,resulted in **savings** of **10%** per EC validation

AWARDS AND ACHIEVEMENTS

Scholastic Achievements	■ Scored **100** in computer science in **CBSE class XII** AISSCE 2016, was among **top 0.5 %** in terms of total score ■ Secured **merit rank** of **7799** out of 12lakh+ students in **JEE** Mains **2016** with score 105/120 in mathematics ■ Achieved **98.44 percentile** in **CAT 2021**, earned admission into prestigious MBA colleges like SJMSOM IIT-B
Case Competitions	■ Selected as **finalists** in the **6 Degrees Analytics event**, organized by Indian Institute of Management Trichy

ACADEMIC PROJECTS

Length of Stay prediction (Regression)	■ Built **Regression model** to **predict LOS of patient** on dataset having **100K+ observations** & **27 attributes** ■ Addressed **Multicollinearity** using **VIF** | Applied **OLS & polynomial** regression; **Lasso** for feature selection ■ Employed **Residual analysis** for model **validation**, **outlier** detection | Improved R^2 **(22% ↑)** using **XGBoost**
Wheat price Forecasting (Time-Series)	■ Forecasted Wheat spot Price for next 5 months using past **13** years **ICE** data ; removed **trend** by differencing ■ Utilized **ADF test** to verify stationarity, analyzed **ACF-PACF** plots for **AR-MA** order and tuned **SARIMA** model ■ Applied **Ljung-Box** for residuals, Reduced **MAPE** to 3.3%(**30% ↓**) by using USD index as **exogenous variable**
Customer churn prediction (Classification)	■ Developed a **classification model** to predict **customer churn** using historical data (~27k rows, 30 features) ■ **Label-Encoded** categorical variables; applied **SMOTE** and Used Graph-based feature extraction (**Node2vec**) ■ Implemented **Log-Reg**, **SVM**, **Random forest(RF)**, **NN**|RF and NN models achieved highest **F1-score of 0.65**
Deep Topic Modeling (Text analytics)	■ Developed **topic modeling** framework on **iPhone** reviews| Preprocessed(**tokenized, lemmatized**) the text ■ Implemented Latent Dirichlet allocation(**LDA**), identified six topics as optimal using **coherence** score metric ■ Improved coherence score(↑ 11%) by **Supervised deep topic modeling** with **BERT** and **K-Means clustering** ■ Identified following **topics** : Camera, Service, Battery, Value for money, Customer care and Amazon delivery
Malaria detection (Heathcare analytics)	■ Developed model to detect **malaria** using 27,558 **blood smear** images from the National Library of Medicine ■ Utilised **image augmentation** techniques; obtained an accuracy of 94% & recall of 95 % using **Custom CNN** ■ Leveraged **transfer learning** & fine-tuned **VGG-19** architecture to further improve accuracy & recall to 96%
Beverage sales (Supply chain analytics)	■ **Optimised supply chain** on the distribution side and simulated alternate strategies for a beverage company ■ Forecasted demand using SARIMA & Holt-Winters and evaluated the current demand fulfillment using **LPP** ■ Suggested D2C, warehouse addition, Outsourcing; lead to **6.8% ↑** in **profits** and 100% **demand satisfaction**

ADDITIONAL PROJECTS

Volatility prediction (Financial risk management)	■ Developed model to predict **Alphabet Inc**. stock **volatility**, tested for **stationarity** of log returns by ADF test ■ Utilized **GARCH** model by performing **LM test** for **ARCH effects** and **ACF/PACF** analysis of **squared returns** ■ Improved **MAPE** from 12 % (obtained for the GARCH) to 5 % by using **LSTM** trained with the **rolling sd** data
News topic classification (Deep learning)	■ Built a model to classify news articles into 4 categories (world, sports, business, science) using 2.5K+ articles ■ Leveraged **Word2Vec**embeddings, trained an artificial neural network to achieve a macro F1-score of **0.45** ■ Applied bidirect. **RNN**, **LSTM** (macro F1-score: **0.69**); attained the highest macro F1-score of **0.89** with **BERT**

POSITIONS OF RESPONSIBILITY & EXTRA CURRICULARS

Sports	■ Captain of **R&D cricket team** in Bajaj that stood as **runner up** in inter department tournament held in 2022

ELECTIVES : FRM, Supply chain analytics, NLP, Econometrics	INTERESTS : Cricket, Weather tracking