

# Hamsha Satish Kumar

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[Open to Spring'23 Full-time Internships & Summer'23 Full-time roles]

Data practitioner, passionate about learning and solving problems using data to provide actionable insights, drive business growth, and enhance customer experience with 3+ years of industry experience building production-grade ML solutions across diverse domains. A continuous learner with comprehensive know-how of Data Science, Data Engineering, CI/CD, and Product Development.

## EDUCATION

### The University of Texas at Dallas

05/23

Master of Science, Business Analytics (Data Science specialization) | GHC'22 Student Scholar

### PSG College of Technology, Coimbatore

05/18

Bachelor of Engineering, Electronics and Communication Engineering | First class with Distinction

## TECHNICAL SKILLS

**Languages:** Python, R, SQL, SAS, Advanced SQL, C, C++, HTML, CSS, JavaScript, Bash

**Big Data Tools:** Druid, Scala, Apache Spark, Hadoop, ETL, ElasticSearch, Kafka, Cassandra, Pig, Impala, MapReduce, Hbase, MongoDB

**Tools:** Airflow, Tableau, AWS, Stata, Google & Adobe Analytics, Git, Jenkins, Docker, SonarQube, Kubernetes, JIRA, REST & SOAP API

**Libraries:** (Python) Tensorflow, PyTorch, Numpy, Pandas, NLTK, Scikit-learn, PyTorch, Spark ML, Keras, Matplotlib, Selenium, SQLAlchemy, Flask, FastAPI, Dash, Plotly; (R) Tidyverse, Plumber, H2O, Prophet, Shiny, ggplot2, Highcharter

**ML Algorithms:** (Supervised Learning) Linear classifiers, SVM, Decision trees, Random Forest, Regression, Time-series, GBM, XGBoost; (Unsupervised Learning) Clustering, Dimensionality Reduction, Sentiment analysis, (Deep Learning) Neural Networks, Transformers

**Methodologies & Frameworks:** Agile, Scrum, Kanban, Design Thinking

## PROFESSIONAL EXPERIENCE

### W.W.Grainger, Chicago [Data Science Intern]

06/22 - 08/22

- Redesigned the retrieval-based Recommender system into a [ranking algorithm](#) to recommend the relevant products by building a neural network model using Word2Vec and BERT embeddings. Increased product relevance accuracy by 8%.
- Exposed the model as TF Serving with Docker to integrate it with Grainger's e-commerce platform.

### Société Générale, Bangalore [Specialist Software Engineer - Data Science]

07/18 - 07/21

- Implemented ARA (Analyze, Recommend, and Automate) engine for [auto-ticket dispatching](#), real-time alerting, auto-healing, and workload forecasting; Saved manual efforts of 10+ operation associates and automated models to reduce failure risk.
- Built a [Recommendation Engine](#) to recommend personalized course content to employees using collaborative filtering and similarity matrix; Increased course completion and user engagement by 18%.
- Engineered optimization models for IT Asset Management to handle recurring alerts and predict critical outages using [anomaly detection](#) & mathematical modeling; Mitigated 20% of high-priority incidents.
- Steered projects to devise Machine Learning algorithms through statistical analysis leading to a process improvement in the Global Technology Solutions Business Unit.
- Deployed end-to-end [time series forecasting](#) and [regression](#) framework with interactive dashboards to predict daily job metrics, trends, and seasonality in the bank's infrastructure, reducing 50% of high-priority incidents.
- Built [one-click dashboards](#) for automated reports and tracked [KPIs](#) for risk, performance, obsolescence, and vulnerabilities for executive management worldwide; These efforts saved 10+ hours/week spent on reporting and analysis.
- Contributed to [AIOps/MLOps](#): In-house solution built to help non-technical employees adopt ML and address clustering, time-series, and Anomaly Detection problems, lessening the coding efforts by 30+ hours per month.
- Awarded [Star of the Quarter](#) and the [Best Innovator](#) for my contribution towards Machine Learning solutions.

### Titan Company Ltd., Hosur [Analytics Project Intern]

12/17 - 05/18

- Designed an [interactive dashboard](#) to capture manufacturing trends and provide analytical insights to management; These insights aided in an increase of in-house production by ~30% and streamlined the quality assurance process.

## PROJECTS

**Text Summarization:** Implemented [Intelligent Document Processing](#) to build an abstractive summary of large documents by applying Text Ranking algorithms and Hugging Face. Exposed as FastAPI and integrated with Dash's front-end.

**Crypto price Prediction:** [Extract, Transform and Load](#) the crypto data from Kucoin API with technical indicators to predict if the price hits Take Profit or Stop Loss and derive the expected return for an investment using LSTM and GAN models.

**AI-based Chatbots:** Developed [conversational chatbot](#) that interprets and answers user queries to improve accessibility using [Natural Language Processing](#) (nltk) and PyTorch.