

# Gautam Naik

## Machine Learning Engineer & Data Scientist

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Machine Learning Engineer with **9 years of software engineering experience**, including **4 years** of progressive learning and hands-on implementation of **Data Science & ML techniques**. Successfully transitioning from software development to machine learning through applied projects that delivered measurable business impact.

- Built AI-driven forecasting models that improved business decisions by 15% and an automated trading system using AWS Lambda & CDK.
- Seeking an ML Engineering role where I can build end-to-end ML systems that combine my cloud architecture expertise (AWS CDK, Lambda) with ML model development skills to create scalable, production-ready AI solutions.

### SKILLS

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**Machine Learning & Data Science:** Python, Predictive Analytics, Statistical Modeling, Supervised & Unsupervised Learning, Time Series Forecasting, Recommender Systems, Experiment Tracking, Generative AI, Scikit-Learn.

**Data Engineering:** Pandas, Polars, NumPy, PySpark, SQL, Simple ETL Pipelines, Web Scraping

**Cloud & MLOps:** AWS (Lambda, API Gateway, DynamoDB, CDK, S3), Docker, MLflow, FastAPI, Flask, Serverless Computing

**Visualization & Databases:** Tableau, Matplotlib, Seaborn, Streamlit, Dash, MongoDB, DynamoDB

### PROJECTS

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#### AI-Powered Sales Forecasting [www.gautamnaik.com/blog/sales-forecasting/](https://www.gautamnaik.com/blog/sales-forecasting/)

Developed an end-to-end ML solution to predict sales across 365 stores, improving inventory planning and business decisions.

- Engineered 30+ features, including temporal patterns, and created a preprocessing pipeline handling 188,340 records.
- Implemented and compared multiple models (LightGBM, Prophet, ARIMA), optimizing for store-level and global forecasting
- Achieved 14% MAPE using Facebook Prophet for global forecasting, enabling more accurate inventory management
- Deployed an interactive Streamlit dashboard allowing stakeholders to generate customizable forecasts at different levels

#### Driver Churn Prediction [www.gautamnaik.com/blog/driver-churn-prediction/](https://www.gautamnaik.com/blog/driver-churn-prediction/)

Built a predictive model to identify drivers at risk of churning, enabling proactive retention interventions for a cab-hailing company.

- Processed and analysed 2 years of historical data from 2,300 drivers using PySpark, efficiently handling driver performance metrics, demographics, and tenure information
- Evaluated multiple ML algorithms from PySpark MLlib, with LightGBM emerging as the best-performing model for this classification task
- Achieved a 0.9 F1 score in churn prediction, balancing precision and recall to accurately identify at-risk drivers without excessive false positives
- Identified key churn indicators and developed targeted retention strategies that operations teams could implement to reduce driver turnover

#### Automated Trading System [www.gautamnaik.com/blog/automated-trading-system/](https://www.gautamnaik.com/blog/automated-trading-system/)

Designed and built a fully automated algorithmic trading system that eliminates manual market monitoring and trade execution.

- Engineered data pipelines to extract and analyze market data using Python and Puppeteer, implementing custom algorithms to generate reliable trading signals
- Architected a serverless, event-driven system using AWS CDK that automatically executes trades based on predefined conditions
- Implemented a complete trading lifecycle with AWS Lambda functions for market scanning, order placement, trade execution, and position squaring
- Designed a real-time data storage solution with DynamoDB that enabled performance tracking and trading strategy optimization

## Dynamic Price Optimization [www.gautamnaik.com/blog/ecommerce-price-optimization/](http://www.gautamnaik.com/blog/ecommerce-price-optimization/)

Developed a data-driven price optimisation framework for an e-commerce platform to maximize revenue and profitability.

- Analyzed 18 months of sales data across 52 products, using statistical methods to determine price elasticity of demand.
- Conducted hypothesis testing to validate pricing assumptions & identify optimal price points for different product categories
- Implemented multi-faceted pricing strategies (value-based, competitor-based, and demand-based), resulting in a 10% improvement in product margins

To explore additional projects, visit [www.gautamnaik.com/blog/](http://www.gautamnaik.com/blog/) and [www.gautamnaik.com/projects/](http://www.gautamnaik.com/projects/)

## WORK EXPERIENCE

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### Software Engineer

January 2024 – Present

Kaara Infotech (Microsoft)

- Built a Generative AI interview conducting bot using LLM for rating candidate answers that lessened the workload of the recruiting team.
- Concurrently advanced ML expertise through self-directed learning and personal projects focused on deep learning and Gen AI, applying software engineering best practices to ML workflows.
- Developed an application using ReactJS. Integrated RTK Query, improving data fetching and caching.

### Lead Software Engineer

April 2017 – November 2023

Grassdoor Logistics Pvt Ltd

- Led the company's transition to data-driven decision-making through ML implementation.
- Built an ML model using the Random Forest algorithm to predict monthly sales, resulting in a 15% increase in profit and better inventory planning.
- Built a recommender system using the Apriori algorithm, resulting in increased sales across product categories.
- Built sales analytics dashboards using optimised SQL queries for efficient data aggregation across multiple sources.
- Increased the engineering team's efficiency by recruiting, training, and supervising a group of 7 junior developers.
- Developed cost-effective serverless microservices using AWS CDK, AWS Lambda, DynamoDB and API Gateway.
- Communicated with stakeholders to gather requirements and provided recommendations that considered both business and technical viability, resulting in reduced development time.
- Collaborated with the UX team to find solutions for problems like cart abandonment, signup drop-offs, and order cancellations using data from Google Analytics, which led to increased sales and user engagement for the company.

### Frontend Developer

Aug 2015 – March 2017

Genora Infotech Pvt Ltd

Designed and launched multiple business websites, increasing sales and reach.

## EDUCATION

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### Padre Conceicao College of Engineering, Goa, India

2011 – 2015

Bachelor of Engineering – Computer Science

### Scaler x Woolf University

2023 – 2025

Master of Science in Computer Science: Artificial Intelligence and Machine Learning

Credential Link: [woolf.university/id/1003119532](https://woolf.university/id/1003119532)