

## SUMMARY

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Visionary **AI and Data Science leader with 14+ years of experience** designing and deploying transformative AI solutions across industries including **government, education, energy, and supply chain**. Proven track record in leading high-impact teams, aligning AI strategy with business goals, and delivering scalable, production-grade products using Advanced Analytics, Machine Learning, Deep Learning, Natural Language Processing (NLP), and Generative AI. Recognized for driving digital transformation through innovation, stakeholder collaboration, and data-driven decision-making.

## PROFESSIONAL EXPERIENCE

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### Principal Data Scientist

(SAAL.AI, Abu Dhabi)

(From Aug 2017 to Present)

#### Leadership & Advisory

- Led and scaled a high-performing data science function, delivering enterprise AI solutions that accelerated product innovation and supported strategic growth initiatives - **driving more than 50 million AED revenue**.
- Designed and implemented the organization's AI and data science strategy, aligning cross-functional initiatives with executive priorities and unlocking **significant cost savings and value creation** through automation and advanced analytics.
- **Collaborated with senior executives and department heads** on the integration of AI/ML, business intelligence, and digital platforms to drive operational transformation, innovation, and data-driven decision-making.
- Directed national-level digital transformation engagements for public sector research and training institutions, ensuring **strategic alignment and stakeholder success** in high-complexity environments.

#### AI Solutions & Business Impact

- **Owned and led the end-to-end development of the LMS Analytics Framework**, an AI-powered solution designed to identify at-risk students, track learning progress, and assess assessment objectivity. The framework not only enabled targeted interventions and improved student outcomes but also **positioned the organization to expand its education analytics offerings**, unlocking new **multi-million AED** growth opportunities through adoption across additional academic institutions.
- Designed and deployed a deep learning-powered talent intelligence platform for role matching, upskilling, and internal mobility. **Streamlined workforce planning and personalized learning**, increasing talent redeployment efficiency across functions.
- Directed the design and implementation of a smart analytics platform as part of a flagship smart city initiative. Led cross-functional teams in developing ML-powered pipelines and interactive dashboards to score urban metrics, rank inspectors, and evaluate agency performance. The platform delivered actionable insights to policymakers and city leaders, **driving data-informed urban planning, resource allocation, and quality-of-life improvements**.
- Conceptualized and delivered Insight Query, a **Generative AI-powered self-service analytics tool** that enabled natural language access to KPIs, automated insights, and real-time dashboards. **Reduced reporting turnaround time by an estimated 80%**, significantly accelerating executive decision-making.
- Designed and deployed a patient **no-show prediction model** using decision trees, random forests, and gradient boosting. By leveraging demographics, insurance type, and consultation history, **the solution reduced missed appointments by 50%**, significantly improving clinic scheduling efficiency, resource utilization, and patient care delivery.
- Developed the Bloodstock Prediction Framework, forecasting progeny success using pedigree and performance data. This work contributed to **a peer-reviewed publication, Knowledge Graph Based Bloodstock Prediction, at ISWC 2019**, strengthening the team's position in applied AI research.

## Data Ecosystem & Operational Enablement

- Led the design of robust MLOps pipelines with **BentoML, MLflow, Docker, and Kubernetes**, embedding **CI/CD workflows** to enable scalable, and rapid production deployment of AI models.
- Collaborated with DevOps and data engineering teams to leverage a cloud-based data lake architecture, supporting downstream tasks such as ML workflows and executive dashboards.
- Defined and **enforced data governance standards**, ensuring quality, security, and accessibility of enterprise data assets for business users and AI teams

## Organizational Enablement & Capability Building

- Promoted a **culture of continuous learning and experimentation** by mentoring junior data scientists and leading internal capability-building programs on AI/ML, data visualization, and storytelling.
- Served as a **strategic liaison** between product, business, and engineering teams, ensuring AI initiatives were aligned with enterprise goals and **delivered measurable business outcomes**.

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## Senior Data Scientist

(Aera Technology, Pune)

(From Jan 2016 to Aug 2017)

- Designed and implemented a price forecasting solution for one of the largest steel and metal distributors in the USA, achieving a **forecast error under 5%**. This solution utilized **advanced statistical and machine learning models**, including macroeconomic indicators such as imports, exports, inflation, and GDP, to predict steel product prices.
- Spearheaded the development of a Supplier Late Delivery Prediction module, showcasing enhanced accuracy in forecasting and a potential **10% reduction in costs** associated with late deliveries. Employing a combination of **traditional, machine learning, and deep learning** classification models in Python.
- Engineered a Batch Quality Prediction module using various batch parameters as predictor variables to assess batch grade, achieving a **forecast error of less than 2%**. Leveraged **machine learning regression models in R and Python**, this module enhances quality control processes.

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## Data Scientist

(Tiger Analytics, Chennai)

(From Mar 2013 to Dec 2015)

- Developed a production-grade forecasting solution for a leading U.S. railcar pooling company to estimate maintenance costs for wheel and non-wheel components. Built an Excel-VBA interface triggering **SAS models (Survival & Regression)**, achieving **forecasts with under 1% error**.
- Developed time series models including **Exponential Smoothing Models and ARIMA/X**, alongside **machine learning models** like regularization and tree-based regression models, to forecast cycle times. Utilizing SAS Forecast Studio, these models were deployed in production, generating monthly cycle time forecasts across 60+ market segments with a **margin of error of 5%**.
- Created a **Test-Control Analysis Tool in Excel with VBA** functionality to analyze the impact of various marketing stimuli, including advertising and promotions. The tool facilitates statistical analysis, summarization, and visualization of results.

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## Business Associate

(Perceptive Analytics, Hyderabad)

(From May 2012 to Mar 2013)

- Created multiple analytical and predictive modeling solutions utilizing R and Advanced Excel (VBA).
- Developed diverse dashboards to analyze data and extract valuable insights.
- Undertook several data processing and manipulation projects utilizing Excel macros.

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## Electrical Engineer

(Coal India Limited, India)

(From Sep 2010 to Dec 2011)

- Gained a strong understanding of the mining industry, including operational processes and challenges.
- Received training and served as an Engineer in the Electric Rope Shovel section.
- Volunteered to collaborate with the IT department on automating daily production reports.

EXPERTISE

Predictive Modeling Techniques	Regression and Classification Models, Time Series Analysis, Univariate and Multivariate Modeling, Survival Analysis, Tree-Based Algorithms, Ensemble Methods (Bagging and Boosting), Dimensionality Reduction, Clustering Techniques
Deep Learning Techniques	Artificial Neural Networks (ANNs), Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Long Short-Term Memory Networks (LSTMs), Transformers, Generative Adversarial Networks (GANs)
Core NLP Techniques	Topic Modeling, Text Analytics, Named Entity Recognition (NER), Sentiment Analysis
LLM & AI Agents	Fine-tuning & prompt engineering with LLMs, Retriever-Augmented Generation (RAG), AI Agents & Automation using LangChain and Agentic frameworks
AI/ML Tools and Frameworks	TensorFlow, Keras, PyTorch, Scikit-learn, XGBoost, LightGBM, NLTK, Spacy
MLOps Frameworks & Deployment	BentoML, MLflow, Docker, Kubernetes
Statistical Tools	Advanced MS Excel, R, SAS, Python
Visualizations	Python (Matplotlib, Seaborn, Bokeh), R (ggplot2), Advanced MS Excel
Development Frameworks	Flask, Django
Databases	Relational (MySQL), NoSQL (MongoDB), Graph (Neo4j), Vector DB (Qdrant)
Languages	Python, VBA, C
Operating Systems	Mac, Windows, Unix
Project Trackers	Jira
Industry Experience	Education, Energy, Healthcare, Defense, Transportation, Supply Chain, Horse Racing, Online Advertising

EDUCATION

Program	Institution	CGPA	Year
Bachelor of Technology (Electrical)	Indian Institute of Technology Madras, Chennai	8.09	2010

PAPER PUBLICATIONS

Knowledge Graph based Bloodstock Prediction Model (ISWC 2019 Approved)
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