

# AKSHAR KUMAR HEMACHANDRA

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## Summary

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Data Engineering & Analytics professional with experience building cloud-based data pipelines, performing advanced statistical analysis, and developing scalable data solutions. Proficient in R, Python, SQL, Tableau, Power BI, Azure, Databricks, and PySpark, with strong capabilities in ETL development, data modeling, and dashboard creation. Experienced in healthcare analytics, predictive modeling, and data-driven problem solving, with the ability to translate complex datasets into actionable insights supporting business and clinical decision-making.

## Technical Skills

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**Programming & Analytics:** Python (NumPy, Pandas, Scikit-Learn, TensorFlow, PyTorch), R (dplyr, tidyr, ggplot2, caret, forecast), SQL, Mongo DB

**Cloud & Data Engineering:** Azure Data Factory, Azure Data Lake, Databricks, Apache Spark, PySpark, AWS S3

**ETL & Pipelines:** ETL workflows, data ingestion, data transformation, Delta Lake, data modeling, orchestration

**Visualization Tools:** Tableau, Power BI, Excel (Solver, PivotTables)

**Machine Learning:** Regression, classification, decision trees, random forest, forecasting (ARIMA/ETS)

**Healthcare IT Systems:** Epic Hyperspace, eClinicalWorks

**Other Tools:** KNIME, IBM SPSS, Google Analytics, ServiceNow, Active Directory

## Education

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### University of Texas at Dallas

*Master of Science in Business Analytics & Artificial Intelligence*  
*Graduate Certificate in Healthcare Information Technology*

Jan 2024 – Dec 2025

Richardson, TX

### PES University

*Bachelor of Business Administration*

Aug 2019 – May 2022

Bengaluru, India

## Projects

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### Azure Data Engineering Project — Cloud Data Pipeline

- Built an end-to-end data pipeline using Azure Data Factory, ADLS Gen2, and Databricks, ingesting 10M+ records with 99.9% reliability and implementing Bronze–Silver–Gold architecture for scalable processing.
- Developed optimized PySpark ETL workflows (schema validation, deduplication, joins), cutting query latency by 60% and reducing compute costs by 35%.
- Designed a star-schema warehouse in Azure Synapse and connected Power BI dashboards for real-time KPIs, enabling fast, self-service analytics.

### COVID-19 Socioeconomic Impact Analysis — Tableau Dashboard

- Integrated datasets from CDC, Kaggle, and U.S. Census to analyze COVID case intensity alongside socioeconomic variables.
- Built a multi-source Tableau model with calculated fields, parameters, and state-level comparisons to test five hypotheses.
- Identified significant patterns including higher case intensity in warmer and high-population states, and declining pollution during peak periods.

### Red Wine Quality Prediction — R (Machine Learning Models)

- Performed data cleaning, outlier removal, and feature engineering on the Kaggle Red Wine Quality dataset using dplyr and ggplot2, followed by correlation analysis to identify candidate predictors.
- Developed Decision Tree and Logistic Regression models using caret, evaluating performance with train/test splits, confusion matrices, and odds ratios.

- Identified key drivers of wine quality — higher alcohol, sulphates, and citric acid increased quality, while volatile acidity, density, and total sulfur dioxide negatively impacted predictions.
- Delivered model visualizations and performance summaries, demonstrating consistent results across training and test sets.

### Hospital Readmission Risk Analysis — R, Tableau

- Cleaned and merged multi-source hospital datasets using tidyverse, performed EDA, and identified key comorbidity predictors of readmission (Diabetes, Stroke/TIA, COPD, Heart Failure).
- Built predictive models using Multiple Linear Regression and Random Forest, improving baseline performance by ~15% and uncovering non-linear relationships.
- Developed ARIMA/ETS forecasting models to predict 12-24-month readmission trends and detect emerging high-risk regions.
- Created an interactive Tableau dashboard visualizing geographic risk patterns, comorbidity distributions, and forecasted readmission trends.

## Experience

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### DXC Technology

**Jul 2022 – Aug 2023**

*Technical Support Engineer*

*Bengaluru, India*

- Resolved 30–40+ technical incidents per day (VPN, network, cloud apps, software), consistently achieving 95%+ SLA compliance for a global manufacturing client.
- Managed Active Directory provisioning, resets, and permission fixes, reducing repeat access-related tickets by ~20%.
- Logged, triaged, and escalated incidents through ServiceNow (ITSM), improving ticket routing accuracy and shortening resolution time.
- Partnered with RDS, on-site support, cloud infrastructure, HR/payroll, and vendor teams to resolve multi-system issues efficiently.
- Authored internal Knowledge Base documentation and trained 10+ new hires, improving onboarding and resolution consistency.
- Supported quality monitoring by assisting with performance dashboards and identifying process improvement opportunities.

### Pollinate Energy

**Feb 2022 – May 2022**

*Business Analyst Intern*

*Bengaluru, India*

- Led a customer research study analyzing 200+ survey responses using Google Forms, Excel, and IBM SPSS, identifying behavioral patterns affecting sales and satisfaction.
- Conducted correlation analysis and statistical testing to evaluate customer needs and product adoption drivers.
- Developed analytical reports that supported sales and marketing strategy improvements and co-authored a research paper documenting findings and business implications.

## Additional Experience

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### University of Texas at Dallas

**Feb 2025 – Dec 2025**

*Housing Operations Student Assistant*

*Richardson, TX*

- Supported 3,000+ residents and families with housing, billing, and facility inquiries, resolving issues efficiently while maintaining strict FERPA compliance.
- Managed front-desk operations in StarRez, performing high-volume data entry, updating room assignments, and maintaining accurate records with 99% error-free documentation.
- Logged and prioritized 50–70+ maintenance requests weekly, improving response coordination and reducing unresolved tickets during peak periods.
- Processed hundreds of mail and package deliveries per week under USPS and university guidelines, ensuring secure and timely distribution.
- Assisted in onboarding and training new student staff, improving onboarding efficiency and overall workflow reliability.

## Volunteer Experience

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### Wildlife SOS, Bannerghatta Bear Rescue Centre

**Jan 2021 – Dec 2021**

*Volunteer*

*Bengaluru, India*

- Assisted in the care and enrichment of 60+ rescued sloth bears, supporting daily routines, welfare monitoring, and habitat maintenance.