Harish Padmanabhan

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EDUCATION

Northeastern University

Boston, MA

Master of Science in **Data Analytics Engineering**

Sep 2024 - May 2026

 Relevant Coursework: Foundations of Data Analytics, Data Management for Analytics, Computation and Visualization, Data Mining in Engineering, Large Language Models

Anna University

Chennai, India

Bachelor of Engineering in Mechanical Engineering

Aug 2018 - Aug 2022

• Relevant Coursework: Python Programming, Statistics and Numerical Methods

TECHNICAL SKILLS

Programming & Scripting: SQL, Python (NumPy, SciPy, Scikit-learn, Pandas, Matplotlib)

Business Intelligence & Reporting: Power BI, Tableau, Data-Driven Insights, KPI Dashboards

Data Engineering & Management: SQL, NoSQL, MySQL, MongoDB, Apache Airflow, SSIS, Informatica

Data Science & Analytics: Predictive Modeling, Statistical Analysis, Data Visualization

Machine Learning: Statistics, Regression, Classification, Clustering, Lasso/Ridge, Hypothesis & A/B Testing

WORK EXPERIENCE

Infosys Limited

Chennai, India

Data Engineer

Aug 2022 - Aug 2024

- Built a scalable, distributed data pipeline framework to process real-time streaming data, reducing processing time by 40% and enabling high-performance real analytics
- Developed and presented interactive **Tableau** dashboards to stakeholders, transforming complex datasets into actionable insights, improving data-driven decision-making by 25%
- Designed data-driven business cases for process optimization, leading to 30% efficiency gains
- Led a team of six data engineers to streamline workflows, reducing project timelines by 20%
- Coordinated project timelines within **Scrum** and **Waterfall** frameworks using **Jira**, optimizing timelines by **20%** and ensuring on-time delivery within scope and budget

PROJECTS

Natural Language to SQL Translation with Fine-Tuned LLM

Jul 2025

- Fine-tuned T5-small on the ATIS dataset to convert natural language queries into executable SQL, achieving over 50% exact match accuracy
- Engineered schema-aware input prompts and custom training logic with layer freezing, optimizer tuning, and early stopping for improved SQL generation
- Built an end-to-end evaluation pipeline using SQLite3 to validate generated queries against the database, ensuring syntactic and execution correctness

Predicting Stroke Risk from Health Data

Apr 2025

- Performed data pre-processing tasks such as handling missing values, feature scaling, and dimensionality reduction to improve model performance
- Developed predictive models using machine learning algorithms to identify early signs of stroke risk
- Visualized results through **Tableau** dashboards, showcasing prediction accuracy and key factors influencing early diagnosis

EV Vehicle Charging Analysis

Dec 2024

- Developed databases for efficient data management by designing optimized schema using **SQL Server** and utilizing real-time data injection techniques to ensure continuous data collection storage for analysis
- Analyzed large datasets of EV charging sessions by applying statistical methods using **Matplotlib** to identify patterns and forecasting energy usage at different locations
- Built interactive dashboards and visualizations using **Tableau** to analyze data on charging station utilization and peak demand times at various geographical locations