

Harini A.J.

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Aspiring Data Scientist | Senior Software Engineer transitioning to Machine Learning & AI

Aspiring Data Scientist with 10+ years of software engineering experience and completing M.Tech in Data Science & Machine Learning from PES University. Proficient in Python, SQL, EDA, and ML/DL frameworks including Scikit-learn, TensorFlow, and Transformers. Strong foundation in data wrangling, statistical modeling, and predictive analytics. Experienced in integrating machine learning models into production-grade software with scalable frontend/backend architectures. Passionate about solving real-world problems through AI/ML.

Core Skills

Data Science & Machine Learning:

- Python (Pandas, NumPy, Scikit-learn, TensorFlow, Transformers)
- SQL (MySQL, Kusto)
- EDA, Data Wrangling, Feature Engineering
- Machine Learning, Deep Learning (CNNs, RNNs)
- NLP, Time Series Forecasting
- Visualization (Matplotlib, Seaborn, Power BI, Tableau)
- Model Deployment (basic understanding)

Software Engineering:

- JavaScript, TypeScript, React, Redux
- C#, .NET, Electron, WPF, Xamarin
- TDD with Jest, Frontend System Design

Experience

Software Engineer II | Microsoft | Dec 2023 – March 2025

- Collaborated with product and UX teams to improve user metrics (CSAT +8%) via data-driven feature enhancements.
- Built and monitored high-performance frontend and backend modules using React and C#.
- Owned global system reliability using data instrumentation and real-time monitoring tools (OKRs, telemetry, Kusto).
- Contributed to predictive modeling of customer satisfaction and feature usage trends (ongoing side project).
- Gained hands-on experience in ETL, pipeline design (ADO), and integration of analytics into product dashboards.

Technical Lead | Oracle India Private Limited | Mar 2020 – Dec 2023

- Led a dev team of 9 to deliver scalable enterprise features for Oracle Marketing Cloud.
- Built reusable React components and implemented complex UIs like nested grids and drill-down dashboards.
- Mentored 4 new hires, improving team velocity by 20%.
- Setup Jest unit tests with 70–80% test coverage.

Senior Software Developer | Oracle India Private Limited | May 2015 – Mar 2021

- Delivered reusable UI components and integrated CKEditor, reducing 80% of development effort.
- Released SMS DLT support under strict deadlines with zero customer impact.
- Implemented CSRF token security across the Oracle Responsys Suite.

Assistant Consultant | Tata Consultancy Services | May 2014 – May 2015

- Refactored JavaScript application, improving setup time from 1 hour to 20 minutes.

Projects & Research

Multimodal LLM for Automated Medical Report Generation

- **Capstone Project, PES University | Python, PyTorch, ViT, BERT, GPT**
- Developed an end-to-end multimodal system combining Vision Transformer (ViT) and BERT for generating structured medical reports from diagnostic images and clinical metadata.
- Designed and implemented a fusion architecture that aligns visual and textual embeddings in a shared latent space to enable contextualized language generation using a GPT-style decoder.
- Fine-tuned the model on large-scale medical datasets (e.g., MIMIC-CXR, FIVES) and evaluated performance using BLEU, ROUGE, and METEOR metrics.
- Achieved clinically coherent outputs suitable for radiological review, demonstrating practical potential for real-world diagnostic support.

Education

M.Tech: Data Science and Machine Learning | PES University | Expected 2026

B.E: Information Science | VTU, AMC Engineering College | 2004