Harsha Prasad

AI / ML Engineer

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TECHNICAL SKILLS

Programming Languages:	Python, TypeScript, JavaScript, Node.js, React.js, Angular
AI & Machine Learning:	Machine Learning, Image Processing & Pattern Recognition, TensorFlow, PyTorch, Pandas, NumPy, NLP, Data Validation & Cleaning, Bias Awareness, ETL, scikit-learn
Database Management:	SQL (Advanced Queries, Indexing), MySQL, PostgreSQL, MongoDB, Redis
Cloud & DevOps:	AWS, Azure, Docker, Kubernetes, CI/CD Pipelines, Git/GitHub, JIRA, EC2, S3, GCP
Tools:	Jupyter Notebook, Tableau, Power BI, Visual Studio, Android Studio

PROFESSIONAL EXPERIENCE

PricewaterhouseCoopers(PwC) - Senior Associate Developer *August 2022 – July 2025*

Python, Node.js, React, Microservices, REST APIs, Event-Driven Systems, Docker, Kubernetes, CI/CD, AWS, Azure, SonarQube, Veracode

- Led the development of a scalable video-consultation platform using microservices architecture, reducing infrastructure costs by 22%, scaling to support 6,000+ daily users, and mentoring two junior engineers.
- Enhanced application performance by redesigning caching layers and optimizing inter-service communication, reducing latency by 20% and lowering server costs by 12%.
- Strengthened platform security by implementing JWT/RBAC authentication across Node.js and Python microservices, remediating eight high-priority vulnerabilities identified through Veracode and SonarQube.
- Deployed and operated containerized microservices on Kubernetes with NFS-backed persistent storage and CI/CD pipelines, enabling reliable workloads, daily releases, and maintaining 99% platform availability.
- Integrated Google Speech-to-Text API with Azure Cognitive Services to create a real-time transcription solution, enhancing accuracy by 8% and reducing manual review time by 5 hours weekly.

FirstCry.com – Software Developer II *February 2020 – August 2022*

Intellitots (ERP) *Node.js, PostgreSQL, Redis, MongoDB, REST APIs, CI/CD, Agile*

- Optimized ERP backend performance through PostgreSQL query tuning and Redis-based caching, achieving a 30% increase in transaction throughput under peak load and resolved critical production database issue.
- Spearheaded automated API deployment pipelines, slashing deployment time by 60% (saving over 2 hours weekly) and eliminating critical incidents related to API performance after implementation, improving system reliability.
- Revamped payment processing architecture with Node.js, cutting payment failure rates by 0.3% and accelerating end-user transaction completion rates while maintaining high data encryption.

Katalyst Software Services Pvt Ltd – Jr Software Engineer *August 2018 – October 2019*

SWMSLive – Drilling Digital Transformation *-Node.js, MongoDB,Power BI, Tableau, Data Analytics, Cloud Deployment*

- Engineered interactive Tableau dashboards to visualize drilling time data, leveraging machine learning algorithms to predict potential downtime, resulting in a 12% reduction in non-productive time.
- Directed the creation of 3 interactive Tableau dashboards after gathering insights from 5 stakeholders, accelerating data-driven decision making processes across the organization by 20%.

EDUCATION

Master of Science - Computer Science, *University of Texas at Arlington, TX, USA* *August 2025 – May2027*

Coursework -Database, Algorithm, DataStructure, Artificial Intelligence, Machine Learning, Data Mining, Cloud Computing & Big Data

ACADEMIC PROJECTS

Forever & Beyond – Wedding Management Database System - Link

SQL, Database Design, ER Modeling, Query Optimization, Indexing

- Designed and implemented a relational DBMS using SQL, ER modeling, normalized schemas, and advanced indexing, validating analytics with Python to uncover a 12% revenue gap, improve throughput by 35%, and earn Best Project Overall.

AI Analytics Copilot (Natural Language to SQL Insights Platform) - Link

AI-Assisted Analytics, Data Visualization, Python, NLP, Machine Learning

- Built an AI-driven analytics tool using NLP, Python, and machine learning to automate data processing and insight generation, reducing decision-making time by 30% and improving accuracy by 15%.

Movie Genre Prediction from Plot Summaries - Link

NLP, Machine Learning, Text Classification, Python

- Developed an NLP pipeline to classify movie genres from plot summaries using text preprocessing, vectorization, and supervised learning.
- Applied techniques such as tokenization, TF-IDF, and multi-label classification, and evaluated performance using appropriate metrics.

CERTIFICATIONS & RESEARCH ACCOMPLISHMENTS

- **Microsoft** - Python Programming Fundamentals.
- **Google** - Machine Learning Operations (MLOps) for Generative AI.
- **Research Publication** - *Visual Smart Sensing Notifier (Smart Refrigerator)*, **ICIRTE 2017**.
  Developed an image-based smart sensing system for item identification, inventory tracking, freshness monitoring, and automated alert generation using data-driven pattern analysis.