Toshal Warke

602-565-6416 | twarke1@asu.edu | linkedin.com/in/toshal-warke | github.com/Maspie

Experience

Machine Learning Intern | *Stealth Startup (Industrial Camera Intelligence)* May 2024 – Aug. 2024

- Built real-time ingestion pipeline on GCP using Pub/Sub and BigQuery for structured camera sensor logs, sustaining sub-2s latency for 30K+ daily events with 99.95% service reliability.
- Designed Streamlit interface connected to Firestore to collect reviewer feedback; enabled rapid prompt refinement, reducing ambiguity in root-cause summaries by 22% through guided human evaluation.
- Tested OpenAI prompt variants using A/B frameworks and measured ROUGE and confidence shift; optimized explanations to reduce user friction and improve interpretability across technical summaries.

Software Engineer (ML-Focused QA) | *ThinkFuture Technologies, India* Mar. 2021 – Jun. 2023

- Engineered Python-based test automation for e-commerce search, improving edge-case detection by 20%, reducing defect escape rate by 15%, and boosting click-through on key product pages.
- Trained XGBoost model on historical QA logs to predict relevant regression cases; reduced manual test selection by 30% and automated prioritization of test modules each sprint.
- Containerized retraining workflows using Docker and deployed to SageMaker via Jenkins CI/CD, achieving 25% inference throughput boost and improving production latency consistency.
- Redesigned test infrastructure into modular microservices with structured logging, trace IDs, and performance flags, improving debugging speed and reducing issue triage time by 35%.

Data Analyst Intern | *Pratham Software, India* Jun. 2019 – Jul. 2020

- Built executive dashboards using Python and Tableau powered by Azure Synapse pipelines; cut reporting lag by 15% and saved two weekly analyst-hours through real-time tracking.
- Refactored Azure Blob pipeline with parallel uploads and trigger-based ingestion, increasing data throughput by 30% while ensuring 99.9% reliability during peak update windows.

Projects

Supply Chain Assistant | *LangGraph, Gemini Flash, Vertex AI* March 2025 – May 2025

- Designed LangGraph-based multi-agent interface using Gemini Flash to analyze vendor delays, cutting root-cause investigation time by 40% and reducing manual escalation bottlenecks.
- Integrated Prophet forecasting with Snowflake SQL agent to predict weekly category demand, improving supply planning and reducing critical product stockouts by 18%.

CLTV Forecasting Pipeline | *Databricks AutoML, BigQuery* Dec. 2023 – Mar. 2024

- Forecasted lifetime value for 250K+ users using Databricks AutoML; achieved 89.7% model accuracy and influenced $1.2M in targeted revenue optimization strategy planning.
- Reduced preprocessing time 40% by implementing modular BigQuery DLT transformations and staging logic, improving reproducibility and data validation before training pipeline stages.

Technical Leadership

Technical Director | *AI Society @ ASU* May 2024 – Mar. 2025

- Led a five-member MLOps team building GenAI demos on AWS, GCP, Vertex AI; organized a 60+ participant hackathon, secured $2K sponsorship, hosted workshops on observability, scaling, LLM inference.

Technical Skills

Programming Languages: Python, SQL (PostgreSQL, MySQL), R
Frameworks & Libraries: scikit-learn, TensorFlow, PyTorch, LangChain, Pandas, NumPy, FastAPI, Transformers
Cloud & MLOps: GCP (BigQuery, Pub/Sub, Cloud Run, Firestore), AWS (SageMaker, S3), Azure ML, Databricks, Jenkins, Docker, Kubernetes
Pipeline & Testing: Airflow, GitHub Actions, dbt, Feast, PyTest, flake8
Visualization & Monitoring: Streamlit, Tableau, Power BI, Cloud Logging, Prometheus
Core Concepts: Forecasting, A/B Testing, Inference, Time Series, Active Learning

Education

M.S. Computer Science; Arizona State University, USA Aug. 2023 – May 2025
B.Tech. Computer Science; University of Petroleum and Energy Studies, India Aug. 2017 – Jun. 2021