ELICE PRIYADARSHINI

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Education

University of Wisconsin–Madison *Expected Dec 2025*
M.S., Electrical & Computer Engineering - Machine Learning   (GPA: 3.85/4.0)
Savitribai Phule Pune University
B.Tech., Electronics & Telecommunication

Experience

Lee Labs (VersaPRM) *Sep 2024 – Dec 2024*
Graduate Researcher, Agentic Reasoning & PRMs
Technologies: Python, PyTorch, LoRA, Llama 3.1, Process Reward Models, data/label pipelines, evaluation

- Contributed across pipeline: chain-of-thought generation and auto-labeling with LLM critic, dataset prep, **LoRA** PRM fine-tuning, and evaluation (WMV, BoN, beam search, MCTS).
- Trained **VersaPRM** (multi-domain PRM) for test-time reasoning; **+7.9%** WMV on MMLU-Pro Law vs. MV baseline; packaged data, checkpoints, and release notes.

Siemens Digital Industries Software *Sep 2020 – Jul 2024*
Software Engineer, Platforms & Integrations
Technologies: React, React Native, TypeScript/JavaScript, REST, SOA/OData, Python, Jest/RTL, Git, CI/CD, JMeter, Selenium

- Built shared widget library (PDF annotator, multi-step wizards, graph/map viewer, Excel-like table) adopted across teams; reduced new-app onboarding by **30–35%**.
- Delivered **sw-table** (tree grid) with Excel-style operations; lazy-loaded 10,000-node cascades; kept p95 expand $< $ **500 ms** in internal tests; fixed memory and re-render hotspots.
- Shipped **17+** Mendix/React apps; standardized REST/OData/SOA patterns (field service, RIM, supply chain, BoMs, A&D); cut time-to-first-usable from **about 3 months** to **about 2 weeks**.
- Created **TAPAS+SQL** chat for Mendix/Teamcenter; achieved **about 40%** faster ad-hoc analysis vs. manual SQL; added schema-drift guardrails and low-confidence fallbacks.
- Built offline-first PDF annotation (React/React Native + PDFTron) with Teamcenter sync: XFDF↔JSON converters, conflict resolution, and access/priority rules.
- Established performance and quality gates (**JMeter/Selenium** + CI); maintained unit test coverage $> $ **95%** with near-zero post-merge UI regressions; authored SOA vs. OData whitepaper; mentored 4 engineers and 2 interns.

Projects

Prod-grade URL Shortener + Analytics *2025*
Technologies: Python, FastAPI, PostgreSQL, Redis, Prometheus/Grafana, OpenTelemetry, Docker, pytest, k6

- Clear REST APIs, normalized schema with targeted indexes, Redis read-through cache, and token-bucket rate limiting.
- End-to-end observability (traces, metrics, logs) with SLOs and dashboards for p50/p95, error rate, and cache hit ratio.
- Load tests (k6): sustained **500 req/s** on a single node with **p95 45 ms**; DB CPU reduced **58%** after caching and index tuning; p95 improved from **92 ms** to **28 ms** (**70% faster**).

RAG Evaluation Pack (Policies Q&A) *2025*
Technologies: Python, FastAPI, PostgreSQL + pgvector, embeddings, reranker, offline eval harness, cost and latency tracking

- Reproducible RAG pipeline with BM25 baseline and embedding + rerank variants; versioned datasets and prompts; guardrails with abstain fallback.
- Offline eval harness reports EM@1, Recall@k, latency, and token cost per query.
- On a 300-question set: **EM@1 61.3%**, **p95 380 ms**, **$0.0011** token cost per query; fallback reduced wrong answers by **34%**.

Smart Screen Reader: Agentic UX Helper (prototype) *2025*
Technologies: Python, LangGraph/AutoGen (prototype), OCR/Vision, TTS, React, Celery+Redis (async), logging/metrics

- Minimal agent graph (planner, tools, stop) with step caps, timeouts, retries/backoff, and PII filters.
- Benchmarks on a 50-screen test set: **p95 narration 1.1 s**, false narration rate **1.2%**, task completion **99.2%**.

Skills

Programming	Python; TypeScript/JavaScript; SQL
Backend & Services	FastAPI; Flask; REST; Auth; Caching; Rate limiting
Data & Databases	PostgreSQL; pgvector; FAISS; Schema ingestion; RAG
Agents	LangGraph; AutoGen; LangChain; LlamaIndex; Tool chaining; Memory; Decision logic; Guardrails; Stop conditions
Orchestration & Queues	Airflow; Prefect; Dagster; Celery; Redis; RabbitMQ; Apache Kafka
Observability	OpenTelemetry; Prometheus; Grafana; Logs; Metrics; Traces; Alerting
DevOps	Docker; CI/CD; Git
Frontend	React; Error boundaries; Product telemetry
Certifications	SAFe Agilist (Scaled Agile); AWS Certified Cloud Practitioner