Bhavana Nare
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PROFESSIONAL SUMMARY:

- ML Engineer with 5 years of hands-on experience in ML and LLM integration, supported by 10+ years of overall software engineering experience.
- Experienced in building and deploying ML- and LLM-powered components used in production workflows, including data preparation, ML-driven reasoning, and integration of LLM outputs into customer-facing systems.
- Proven impact architecting AI-driven systems that reduced operational risk, cut manual effort by 60–70%, and scaled into enterprise CI/CD environments.
- Expertise in system architecture, performance optimization, and automation, with hands-on leadership across the full SDLC.

PUBLICATION- Computational Trust

- Bhavana Nare, Computational Trust Framework for Human–Robot Teams, Master's Thesis, University of Georgia, 2023.
- Designed a machine-learning-based trust modeling framework for human-robot collaboration.
- Implemented Bayesian and probabilistic models for dynamic trust scoring under uncertainty.
- Evaluated system behavior across multiple interaction scenarios using Python ML pipelines.

EDUCATION & RESEARCH

- **Master of Computer Science (Thesis)** — University of Georgia, Athens, GA
  Aug 2021 – May 2023 | GPA: 3.7 / 4.0

- **Bachelor of Technology in Computer Science** — Sree Vidyanikethan Engineering College, Tirupati, India
  Oct 2010 – Apr 2014 | GPA: 7.9 / 10

PROFESSIONAL EXPERIENCE

Cybersecurity AI Analyst — *Rivian Automotive (May 2025 –Present)*

- Developed and integrated LLM-powered analysis components using Google Vertex AI to perform context-aware secure code analysis, delivering reliable, production-ready outputs under regulated system constraints.
- Designed a modular scanning architecture that combines LLM-based vulnerability reasoning with Jira and Databricks feedback loops, enabling continuous reduction of false positives and prioritization of proven, exploitable findings.
- Implemented production-grade AI orchestration—prompt templating, context injection, concurrency control, retry/backoff, and audit logging—ensuring reliable, explainable, and auditable AI usage in enterprise pipelines.
- Delivered actionable security outputs through automated GitLab MR comments, rich HTML reports, and structured telemetry, improving developer adoption and accelerating secure remediation workflows.
- Queried vulnerability data via GraphQL to identify affected dependencies, retrieve impacted file paths and remediation guidance, and filter vulnerabilities by type and severity to drive automated fixes to create a MR and Slack-based notifications to eliminate manual coordination across teams.

Senior Software Engineer — *Robert Bosch (Aug 2024 –May 2025)*

- Designed an MLOps-ready analytics framework to generate reliable health signals from pull request activity, enabling data-driven assessment of release behavior and delivery risk.
- Built automated data ingestion and transformation pipelines that convert raw PR events into structured, versioned datasets suitable for feature engineering, trend analysis, and downstream ML workflows.
- Implemented deterministic labeling and feature extraction logic using PR metadata and file-change patterns, establishing consistent inputs for ML-assisted evaluation and experimentation.

- Developed operational dashboards to track feature distributions, throughput trends, and stability indicators, supporting validation of data quality and signal usefulness over time.
- Ensured end-to-end MLOps reliability by adding monitoring, alerting, and data completeness checks, maintaining trust in analytical signals used for intelligent decision-making.

Lead Software Engineer *Robert Bosch (Aug 2023 –Aug 2024)*

- Led the design of a config-driven lockfile orchestration framework to safely manage multiple Software Building Blocks (ACP, BSW, Driving, Parking, DFC), prioritizing scalability, flexibility, and low operational overhead as integration complexity grows.
- Introduced a declarative combination strategy using structured configuration to support selective integration scenarios (e.g., latest ACP with existing Driving), enabling controlled experimentation while minimizing integration risk.
- Established strong traceability and auditability guarantees by capturing the source and timing of every dependency update, ensuring releases were reproducible, reviewable, and compliant with enterprise and regulatory expectations.
- Embedded the framework into CI/CD Azure pipelines to execute multiple integration paths automatically, optimizing reliability, repeatability, and early failure detection without slowing developer workflows.
- Automated downstream pull request creation once stable combinations were verified, reducing manual coordination, human error, and cycle time, and enabling teams to focus on higher-value engineering work.

Senior Software Engineer *Continental Automotive (May 2019 – July 2021)*

- Contributed to ML-based computer vision object detection pipelines for ADAS camera systems, delivering perception outputs consumed by Emergency Braking Assistance (EBA) and other safety-critical downstream functions.
- Integrated and curated labeled training datasets into YOLO-based object detection pipelines, enabling iterative model training, validation, and performance evaluation across multiple data versions and operating conditions.
- Supported the transition from 2D to 3D bounding box detection, improving object localization, depth awareness, and spatial accuracy for perception outputs used in ADAS decision-making logic.
- Collaborated cross-functionally with labeling, software engineering teams to analyze detection behavior, identify failure modes, and refine model outputs against functional requirements.
- Validated perception outputs against accuracy, recall/precision thresholds, and production-readiness criteria, ensuring alignment with ADAS safety and performance expectations.
- Assisted in evaluating model performance across diverse scenarios and edge cases, supporting data-driven decisions for model iteration and deployment readiness.

ADDITIONAL EXPERIENCE

- **Python Developer & Data Analyst** — Teradata India Pvt. Ltd August 2018 – May 2019
- **Senior Software Engineer** — Tata Consultancy Services (TCS) June 2014 – August 2018

TECHNICAL SKILLS

- **Machine Learning, LLMs & Modeling:** LLM Integration & Inference Workflows, Vertex AI, AWS Bedrock, PyTorch, scikit-learn, Pandas, NumPy, OpenCV
- **Data & Experimentation:** Feature-Driven Analysis, Data Exploration & Metrics, SQL, Databricks
- **ML Deployment & Systems:** Production ML / LLM Reliability, Monitoring of Model Outputs, AWS (Lambda, SageMaker, S3, DynamoDB, RDS, API Gateway, Step Functions)
- **Programming Languages:** Python, Java, C++, Bash / Shell, JavaScript (React)
- **Data Storage:** DynamoDB, PostgreSQL, Amazon RDS, S3, Vector Databases (pgvector)
- **DevOps & CI/CD (Supporting):** Docker, Terraform, GitHub Actions, GitLab CI, Jenkins, Artifactory
- **Observability & Analytics:** CloudWatch, Splunk, Structured Logging, Metrics & Alerting, Hex, Matplotlib
- **Engineering Practices:** Microservices, System Design, Performance Optimization, Agile Development