

PRABHATH PALAKURTHI

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EDUCATION

George Mason University

2022 – 2026

Bachelor of Science in Computer Science, GPA: 3.50/4.00

WORK EXPERIENCE

AI Engineer Intern | TechSur Solutions LLC, Reston, VA

May 2025 - Aug 2025

- Engineered a distributed AI developer platform using Java Spring Boot to transform product requirements into structured DSL specifications and auto-generate Jira user stories, reducing manual workflows by 80% and accelerating release cycles.
- Designed and deployed service-to-service MCP layers enabling structured LLM-to-system interactions across distributed back-end services, improving reliability and modular orchestration.
- Built a VS Code extension leveraging LangChain and LangGraph to orchestrate RAG-powered, multi-agent workflows for code and test generation, improving developer productivity by 70%.
- Added structured logging, metrics instrumentation, and error handling to ensure observability, debuggability, and resilience in production-grade AI workflows.

Software Engineer Intern | Automate365 (VoiceBotics), Fairfax, VA

Mar 2025 - May 2025

- Designed and deployed scalable Python microservices integrating CRM APIs to automate customer lifecycle workflows, reducing manual operations by 60%.
- Architected event-driven backend pipelines using FastAPI, PostgreSQL, and asynchronous task processing for real-time tagging and segmentation.
- Implemented authentication, structured logging, telemetry metrics, and centralized error handling to improve system reliability and reduce debugging turnaround time.
- Contributed to CI/CD pipelines and containerized deployments (Docker) to maintain high availability and consistent production releases.

Software Engineer Intern | Rise Consultancy, Remote

May 2024 - Aug 2024

- Developed full-stack applications using React.js, Node.js, and AWS to support production workloads, improving performance and scalability by 20%.
- Designed and optimized RESTful APIs with efficient query handling and caching strategies, reducing redundant requests by 30%.
- Built and integrated cloud-native AWS infrastructure (EC2, S3, Lambda, RDS) to support fault-tolerant, distributed deployments.
- Debugged and resolved 40+ production issues by analyzing logs, API traces, and failure patterns, improving overall platform stability.

PROJECTS

ReplicAI Next.js, TypeScript, Python, FastAPI, Redis, RAG, xAI, PhotonAPI – GitHub

2026

- Engineered an AI-powered social automation platform that monitors X and Reddit in real-time, generating context-aware replies and daily posts to help startups maintain consistent online presence and engagement.
- Designed event-driven, asynchronous microservices with rate-limiting, scheduling, and guardrails (filters, duplicate suppression, persona control) to ensure scalable, safe, and on-brand automated interactions.

LastMinute.ai Next.js, TypeScript, Python, LangGraph, Gemini API, Docker – GitHub

2026

- Built a multi-stage AI orchestration pipeline using LangGraph to ingest heterogeneous inputs (PDFs, PPTs, OCR images), extract structured representations, and rank semantic priorities.
- Designed a service-oriented Python agent backend integrated with a Next.js frontend through controlled execution pipelines, enabling modular workflow expansion and safe AI-generated outputs.

Smart Resume Screener Spring Boot, FastAPI, Microservices, Docker – GitHub

2025

- Developed a microservices-based candidate-job matching engine using embedding-based similarity scoring and custom NLP pipelines.
- Designed RESTful APIs and clearly defined service boundaries to support scalable resume ingestion, structured data processing, and independent AI service deployment.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, SQL, C/C++, Go

Backend & Systems: Spring Boot, FastAPI, REST APIs, Microservices, Distributed Systems, Service-to-Service Communication

Cloud & DevOps: AWS (EC2, S3, Lambda, RDS), Docker, Kubernetes, CI/CD, Observability, Telemetry

AI / ML: LangChain, LangGraph, PyTorch, TensorFlow, Hugging Face