Pradeep Alapati

pradeep.alapati8055@gmail.com | linkedin.com/in/pradeep-alapati | Boulder, Colorado

Education

University of Colorado Boulder Aug 2025 – May 2027
Master of Science in Computer Science **GPA: 3.85/4.0**

Birla Institute of Technology and Science, Pilani Aug 2019 – July 2023
Bachelor of Engineering in Electronics and Communication **GPA: 3.25/4.0**

- **Relevant Coursework:** Data Structures & Algorithms, Object-Oriented Programming, Operating Systems, Distributed Systems, Communication Networks, Linear Algebra, Natural Language Processing, Neural Networks, Algorithmic Human-Robot Interaction

Technical Skills

Languages: C++, Python, JavaScript, TypeScript, SQL, C, C#

Developer Tools: Git, Docker, GitHub, GitLab, AWS, Azure, Kubernetes, Terraform, Jira, k9s, Confluence

Technologies/Frameworks: REST APIs, PostgreSQL, MongoDB, FastAPI, .NET, Angular, PyTorch, Streamlit, Langchain, Milvus

Experience

Associate Software Development Engineer 2 | Publicis Sapient May 2024 – Aug 2025

- Architected and deployed scalable Kubernetes infrastructure for self-hosted LLMs with vLLM pods, reducing proprietary API dependency by 85% while supporting 100+ concurrent requests
- Built enterprise AI compliance platform with 25+ validators achieving 95% uptime using Python, FastAPI, LangChain, and Redis across AWS/Azure multi-cloud environments
- Developed intelligent LLM proxy gateway implementing user access controls, token management, and routing algorithms across proprietary and open-source models
- Optimized GPU utilization through timeslicing and multi-instance strategies, achieving 75% cost reduction while maintaining sub-200ms inference latency
- Automated CI/CD pipelines using Azure DevOps and GitLab, and deployed distributed infrastructure (Milvus, Kafka, Spark), cutting deployment time by 70% and maintaining 98% system availability

Associate Software Development Engineer 1 | Publicis Sapient Nov 2023 – May 2024

- Architected scalable microservices-based Order Management System using C/.NET with 6 services on Azure SQL, achieving 99.5% uptime
- Implemented OAuth 2.0 authentication with Google integration, JWT tokens, and Redis OTP storage, reducing security vulnerabilities by 40%
- Optimized infrastructure costs by 35% through Azure SQL Elastic Pool consolidation, Terraform IaC, and Azure DevOps CI/CD automation

Research Intern | IUDX Program Unit (IISc Bangalore) Jan 2023 – July 2023

- Developed privacy-preserving mechanisms leveraging differential privacy to protect government data, enabling secure insights into sensitive data while boosting utility by 20% and improving privacy metrics by 33%.
- Implemented autoencoders and variational autoencoders for privacy-preserving data processing using TensorFlow and Opacus frameworks

Projects

Cloud Drive Platform – Raspberry Pi 4B (C++ | Linux | Systems Programming)

- Built a self-hosted cloud storage system in C++17 supporting concurrent file uploads/downloads via HTTP, handling multi-threaded requests on a resource-constrained 2 GB RAM device with <100ms response latency.
- Implemented RAID-5 redundancy across 4 USB drives using mdadm , achieving 99.9% data durability with automatic fault tolerance and recovery mechanisms.
- Designed secure authentication system with OpenSSL SHA-256 password hashing, session tokens, and role-based access control (user/admin), protecting N concurrent users with thread-safe operations.
- Deployed production-grade backend on Linux with remote SSH access, automated build pipeline , and real-time monitoring.