Vamsi Krishna Alluri

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SUMMARY

Software engineer with 3+ years of experience building and maintaining scalable, cloud-native microservices (80+ services) in high-volume financial systems. Proficient in designing modular, reusable components for multi-tenant architectures using .NET, ASP.NET MVC, and T-SQL, with exposure to Azure Event Hub, Docker, and Service Fabric. Strong background in performance tuning, cloud migrations, and secure, automated deployments via Azure Pipelines. Collaborated across DevOps, QA, and product teams, and mentored 3 junior engineers and 2 interns to accelerate delivery and uphold engineering best practices.

SKILLS

Programming and Database	C#, Python, C, C++, SQL, Java, shell scripting, MongoDB, PostgreSQL, Redis.
Frameworks	.NET, MAUI, Entity Framework, LINQ, RPC, React, TypeScript, Angular, SOAP.
DevOps	Git, CI/CD (Azure Pipelines and AWS CodePipeline), Docker.
Cloud Platforms	Azure (App Services, Functions, Service Bus, App Config, App Insights, RBAC)

WORK EXPERIENCE

Blend Labs, Inc. (Title365) – *Chennai, India* **Jul 2020 – Jul 2023**

Software Engineer II Mar 2022 - Jul 2023

- Engineered high-performance SQL queries, reducing search times by 10+ seconds across 15M records.
- Utilized Toad query profiler to analyze Query Execution Pipelines, identified 2 bottlenecks, optimizing indexes and queries.
- Led 8 critical workflows during a 2-month company-wide reorganization affecting a 7-person team, ensuring 99.8% system uptime and operational continuity by implementing structured handover protocols and daily status tracking.
- Collaborated with QA, DevOps, and product teams to deliver 20+ features via 2-week sprints, resolving 200+ technical debt items.
- Identified 400+ vulnerabilities across 150 projects using **Fortify**, significantly improving overall performance, and scalability.

Software Engineer I Jul 2020 - Mar 2022

- Acted as the technical POC for cross-team integration during Azure tenant migration, guiding 4+ developers and orchestrating the seamless transition of **80+ microservices** and 10 app services with zero downtime, ensuring uninterrupted operations.
- Managed 80+ Service Fabric microservices using **pub-sub** and **processor-dispatcher** design pattern.
- Developed a tracking dashboard using Angular and Razor Pages to monitor transactions/orders across Adapter, Processor, and Dispatcher stages, enabling real-time visibility and streamlined debugging in a microservices architecture.
- Transformed Project Development methodology from Kanban to Scrum, regulating deployment throughput of SDLC to 2 weeks.
- Authored 50+ API design documents using **OpenAPI/Swagger**, cutting integration update cycles by 30%.

Software Engineer Intern, Xome [Mr. Cooper Group] – *Chennai, India* **Jan 2020 – Jul 2020**

Xome(Title365) is acquired by Blend Labs, Inc.

- Streamlined internal workflows by designing an Android app with Java and MSSQL backend, reducing data entry errors by 90%.
- Developed high-performance multithreaded MVC and REST API applications in .Net Framework, powering 100+ concurrent user operations and enhancing system scalability.
- Constructed dynamic web applications using TypeScript and Angular, incorporating MSSQL backend integration, revolutionizing user experience through data-driven views.
- Championed Agile methodology adoption, leveraging Azure Boards and Repos to drive efficient task tracking and collaboration, accelerating sprint completion rates by 20% and team productivity.
- Managed incident response for 50+ downtime alerts in PagerDuty, with post-mortem analysis and hot fixing the issues within SLAs.

ACADEMIC PROJECTS

Evaluation on Vector Databases **Sep 2024 - Dec 2024**

- Conducted comprehensive analysis of three state-of-the-art vector similarity search systems (Acorn, Starling, and Vexless), resulting in detailed performance comparisons across various workload characteristics and system constraints.
- Analyzed cost-performance tradeoffs between serverless and traditional computing architectures for vector search, demonstrating up to 5.3x cost savings potential for bursty workloads using cloud functions.
- Examined block shuffling and in-memory navigation graph techniques in disk-based vector search, highlighting how these approaches achieve 43.9× higher throughput and 98% lower query latency compared to baseline methods.
- Investigated predicate-agnostic construction methods for vector search indices, documenting how these approaches support arbitrary and unbounded predicate sets while maintaining 2-1000× higher QPS at fixed recall rates.

EDUCATION

Purdue University, West Lafayette, United States - *Masters, Computer Science (Cybersecurity)* **Jun 2023 – May 2025**
Coursework: Security Analytics, Software, Network and Information Security, Database Systems, and Computer Networks.

Sathyabama University, Chennai, India - *Bachelors, Computer Science and Engineering* **Jul 2016 – May 2020**
Coursework: Algorithms and Data Structures, Operating Systems and Computer Architecture, Machine Learning.

CERTIFICATIONS

- **Microsoft Azure Fundamentals (AZ-900)** **Jan 2025**