

## Summary

Product-focused engineer with 15+ years of experience building backend systems, APIs, and distributed platforms that power real-world applications. Designs and delivers intelligent systems that connect data, behavior, and context into adaptive, production-ready solutions.

Builds systems across embeddings, retrieval (RAG), and LLM-integrated pipelines, combining backend architecture, data pipelines, and product thinking to enable context-aware decision systems at scale

## Core Capabilities

**AI Systems:** Embeddings, Vector Search, Retrieval (RAG), LLM Pipelines

**Backend Engineering:** APIs, Distributed Systems, Microservices

**Data Systems:** Pipelines, Feature Engineering, Signal Processing

**Cloud Platforms:** AWS (Lambda, S3, RDS), Azure

**Product Execution:** Release ownership, cross-functional delivery

**System Design:** Context-aware systems, real-world data handling

## Career Experiences

**Product Lead**, Yum Brands, Dallas, TX

**Apr 2024 – Present**

- Designed and built AI-assisted predictive suggestion capabilities within Menu Request Hub, enabling intelligent configuration recommendations during search and authoring
- Own end-to-end development of enterprise menu platform (MOA), including backend services, API's and frontend workflows
- Developed and validated API contracts (JSON/XML/YAML), ensuring reliable request-response flows across distributed services
- Improved system performance and scalability leveraging AWS services, while enhancing observability through CloudWatch and Datadog dashboards
- Bridged product and engineering by translating requirements into system design decisions and driving implementation alignment
- Contributed to integration of enterprise AI capabilities (Crave AI), ensuring safe and reliable incorporation into production workflows

**Product Analyst**, PACCAR, Lewisville, TX

**Oct 2023 – Apr 2024**

- Contributed to PACCGPT, an enterprise AI-driven knowledge interface integrating internal systems and operational data across enterprise workflows
- Helped define product-driven integration pathways for Connected Vehicle Platform (CVP), aligning diagnostic and fleet data with system-level use cases
- Worked on event-driven architecture and Azure-based data pipelines to support system modernization and improve data flow across systems
- Helped shape API integrations and data flows across distributed enterprise systems, ensuring reliable system communication

# Syed Zameer M

- Translated product requirements into structured data models and engineering workflows, aligning event-driven inputs with system design and implementation
- Performed data normalization and transformation of large-scale XML/JSON event data using Python, structuring datasets into Snowflake tables for downstream use

**Technical Product Owner**, Toyota Motors, Plano, TX

Sep 2021 – Jul 2023

- Led API mapping and end-to-end data flow design across legacy and cloud-native systems
- Supported AWS migration and microservices transformation initiatives
- Defined system requirements and integration patterns for scalable backend architecture
- Aligned stakeholders across product and engineering to ensure consistent delivery

**Technical Analyst**, United Airlines, Houston, TX

Feb 2020 – Sep 2021

- Supported development of customer-facing mobile systems across full lifecycle
- Conducted gap analysis and modernization planning for legacy-to-cloud transitions
- Ensured API compatibility and performance across platforms
- Collaborated across engineering and design teams for delivery execution

**Earlier Experiences**, (Aspire Systems, NTT Data, Wipro)

Sep 2009 – Dec 2020

- Worked on enterprise systems across healthcare, finance, and retail domains, supporting high-volume transactional workflows
- Implemented data processing and automation pipelines using SQL/Python for structured transformation, validation
- Contributed to large-scale systems involving compliance, integrations, and performance-sensitive processing
- Supported system reliability through testing, validation, and cross-team coordination across Agile delivery cycles

## Projects & Applied Systems

**TruSic** (Context-Aware Music Intelligence System)

- Built an AI system that retrieves music based on real-time human state instead of static listening history
- Processes raw waveform inputs through multi-stage transformation (feature extraction → vectorization → embedding alignment), enabling mapping of human state to music selection
- Combines audio embeddings (CLAP), physiological signals, and behavioral triggers into a shared representation space
- Implements vector similarity search (pgvector) to align internal state with music selection
- Designed dual pipelines: audio intelligence and human context modeling ([Code](#))

**Unnamed Health Engine** (Adaptive Intelligence Pipeline)

- An end-to-end system converting physiological data (Oura) into structured health signals and adaptive guidance
- Combines rule-based reasoning with LLM-generated outputs for human-readable recommendations
- Designed for real-world reliability, handling API failures, missing data, and variability
- Automated pipeline using scheduled workflows with GitHub Actions ([Code](#))

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## Resume Site RAG Based (Interactive System)

- Built a retrieval-augmented generation (RAG) system over a structured personal corpus
- Implements chunking, embeddings, retrieval, and LLM response generation
- Enables conversational interaction with systems and experience instead of static resume consumption
- Integrated FastAPI backend with lightweight frontend for real-time interaction ([Code](#))

## Technology Stack

**Languages & Data:** Python, Java, SQL, PostgreSQL (pgvector), MySQL, Snowflake

**AI & ML:** PyTorch, TensorFlow, scikit-learn, Embeddings, Vector Search (pgvector), Retrieval (RAG)

**Cloud:** AWS (Lambda, S3, RDS, API Gateway), Azure (Data Factory, Functions, SQL)

**Systems:** Microservices, Distributed Systems, Event-Driven Architecture, Kubernetes

**Frameworks & Tools:** FastAPI, Postman, Swagger, Splunk, Datadog, CloudWatch, GitHub Actions, Jira

## Certifications

AWS Certified Solutions Architect

Google IT Automation with Python

Certified Kubernetes Application Developer (In progress)