Anthony Arroyo

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AI Systems Engineer

Visual Studio | SQL | Azure Foundry

Skills and Certifications

Orchestrations	*Azure AI Engineering Certification*	*C# Certification*	*Software Development*
Object Oriented Design/UML	*Debugging*	*Web Services/APIs*	*Testing*

Technology

- C# 12, HTML5, SSMS, Retrieval-Augmented Generation (RAG), Machine Learning, AI Agent Architectures, AI Pipelines, Software Development Lifecycle, Large Language Models (LLMs), OpenAI, SOA, OOD, DDD, Design Patterns, Model Context Protocol (MCP), Vector Search & Embeddings, Version Control, Swagger API, Documentation, Dependency Injection, Project Management, Client Management, Git, Powershell, Azure, Mac, Windows

Core Compentencies

- AI systems mindset with emphasis on long-term maintainability, model evolution, and scalable integration.
- Translating ambiguous business problems into AI-augmented domain models, decision workflows, and automation pipelines.
- Designing backend platforms that orchestrate AI models, business rules, and stateful lifecycle management for reliable production systems.
- Building headless, API-driven AI platforms capable of supporting multiple interfaces, agents, and intelligent applications.
- Structuring applications to support AI capabilities, model upgrades, and experimentation without introducing architectural complexity.
- Isolating core business logic from AI inference layers to improve system reliability, testing, and model swap-ability.
- Applying incremental AI system architecture with clear boundaries between model services, orchestration layers, and business logic.
- Maintaining a strong focus on data integrity, deterministic behavior, and safe integration of probabilistic AI outputs.
- Implementing Model Context Protocol (MCP) to enable structured interaction between AI models, system context, and enterprise workflows.

Experience

Microsoft Azure AI Engineer Associate (AI-102)
- Azure AI Solution Development & Intelligent Application Integration
Completed the Microsoft Azure AI Engineer Associate certification, focusing on designing and implementing production-ready AI solutions using Azure AI services, machine learning integrations, and generative AI capabilities. Developed expertise in building scalable AI-enabled applications that integrate language, vision, speech, and generative AI models into enterprise workflows.
Responsibilities and technical focus included:

- Designed and implemented AI-powered applications using Azure AI services including Azure OpenAI, Cognitive Services, and Azure AI Studio
- Integrated large language models (LLMs) into application workflows for intelligent automation, conversational systems, and knowledge retrieval
- Developed REST-based AI service integrations to enable scalable AI inference and application-level AI capabilities
- Built AI pipelines that combine language processing, document analysis, and semantic search for intelligent data processing
- Focused on emphasizing reliability, scalability, and responsible deployment in cloud environments

Gracie Tampa Network
-Martial Arts Academy Management Platform
Saved instructors 33% of quarterly administrative time by architecting and developing a custom academy operations platform that streamlined student promotion workflows and centralized attendance, scheduling, and membership data into a unified system. Eliminated manual spreadsheets and promotion guesswork by establishing a single source of truth for student progress and eligibility. Built using layered Clean Architecture, separating API, application services, domain logic, and data access to ensure scalability, maintainability, and long-term extensibility.

- Reduced SQL management overhead by managing SQL schema using Entity Framework Core (Code First).
- Minimized manual promotion errors by automating eligibility logic based on attendance, time-in-rank, and instructor criteria, enforcing validation and domain rules to ensure accurate rank advancement.
- Designed a headless, loosely coupled .NET API and MCP-based AI integration, allowing the system to expose structured domain context to AI agents while preserving boundary integrity, scalability, and UI independence.
- Applied Repository and Service patterns to decoupled business rules from persistence concerns.

Frequent Music Discord
- AudioQuiplash Application
Increased community membership by 27% while hired to design and build a custom interactive knowledge-driven game for a creator's community. The system combined structured note-taking, tagging, and search mechanics to power fast content retrieval, progression logic, and repayable challenges. Built with a strong emphasis on efficient querying, data consistency, and long-term maintainability using clean architecture principles.
Responsibilities and technical focus included:

- Designed application states to manage idle, armed, triggered, and playback phases
- Implemented event-driven logic to handle randomized audio triggers and conditional execution
- Structured the application for extensibility, enabling new audio rules, triggers, or behaviors to be added without modifying core logic
- Focused on clear separation between control logic and audio execution, improving maintainability and testability