STUART (BRETT) BENEFIELD

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PROFESSIONAL SUMMARY

AI Engineer with 14+ years of software engineering experience and 4 years in applied Data Science and AI. Specialize in multi-agent architectures and MCP servers, with a track record leading production AI systems from PoC through deployment. Combine technical architecture ownership with hands-on mentorship, automated testing strategy, and cross-functional delivery across distributed teams.

TECHNICAL SKILLS

Languages	Python, Java, C++, SQL, Bash
AI / ML	Multi-agent orchestration, contextual/prompt engineering, LLM integration (Anthropic, OpenAI, Gemini, Watson), vector databases, LangGraph, LangChain, MCP servers
Backend / APIs	FastAPI, Flask, Pydantic, SQLAlchemy, PostgreSQL, Kafka, REST
Data / Pipelines	PySpark, Pandas, Elasticsearch, NiFi, ETL pipeline engineering, data modeling
Infrastructure	Watson Cloud Services, Git/GitHub, CI/CD, Kubernetes, automated testing frameworks
Practices	Code review, architectural design, technical mentorship, dependency management

PROFESSIONAL EXPERIENCE

IBM • Austin, TX — Oct 2022 – Present
AI Engineer

- Led architecture and end-to-end delivery of a multi-agent AI platform from original PoC through live SOC deployment, orchestrating LLM pipelines for automated alert triage and enrichment and achieving 3x faster analyst triage.
- Set architectural direction for scalability and maintainability across the agent pipeline, including state management, error handling, and observability patterns now adopted across the team.
- Engineered structured prompt chains and contextual prompt architectures for alert triage and summarization, improving response consistency across variable input conditions.
- Mentor junior engineers on agentic AI patterns, LangGraph orchestration, and LLM evaluation; drive technology selection across the AI stack with explicit trade-offs around latency, cost, and maintainability.

IBM • RTP, NC — May 2021 – Oct 2022
Automated Systems Architect

- Led a multinational team across the US, India, and China delivering automated test orchestration infrastructure across proprietary OS, z/OS, and Linux environments, reducing validation overhead by 12%.
- Defined automated testing strategy and best practices, including sequential test orchestration patterns and shared test utilities reused across product lines.
- Trained a Random Forest classifier to map firmware error codes to hardware faults in noisy log environments, automating ticket creation with pre-populated diagnostic context and intelligent routing.

IBM • RTP, NC — Sep 2015 – May 2021
Electromagnetic Compatibility Engineer

- Built automated data collection and analysis pipelines for radiated emissions testing, replacing manual log review with systematic pattern detection across hardware performance data.
- Engineered a remote lab access system combining VPN infrastructure and Python-based test automation to trigger frequency and voltage changes on mainframe hardware, enabling off-hours testing without on-site presence.
- Applied statistical analysis to EMI root cause investigation, isolating a fiber optic connector as the emission source and preventing a costly switch redesign.

EDUCATION

- **Master of Science in Data Science • Southern Methodist University** — *Dec 2019*
  Thesis: Applied NLP and transformer models to classify regulatory compliance requirements for enterprise products.
- **Bachelor of Science in Electrical Engineering • Oklahoma State University** — *Dec 2010*

ADDITIONAL

- 12 patents from electrical engineering and hardware systems work.