Garrett Gruss

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SUMMARY

AI/ML Technical Lead with 2+ years building production GenAI systems at scale. Led multiple engineering teams developing LLM-powered applications using Langchain, RAG architectures, and graph databases. Proven track record delivering enterprise AI solutions that drive digital transformation in defense and manufacturing. Active Secret Clearance.

WORK EXPERIENCE

AI/ML Technical Lead — Systems Engineer, Lockheed Martin PAC-3   Apr 2022 - Present

– **Leading PAC-3 Sustainments's first production AI/ML system** – Leading team building FastAPI-based data pipeline processing manufacuring and operations records. Architected SQLAlchemy ORM with PostgreSQL backend and Pandas + Pandera ETL workflows. System will enable sustainment of $9.8B of fielded equipment.

– **Engineered SysML GenAI code generation platform** – Architected and led 4-engineer team developing ArchImedes suite (Java/Python microservices) that auto-generates Cameo system models and requirements documents from natural language. Implemented Langchain/Langgraph pipelines with Neo4j Graph RAG and vector databases. Deployed on OpenShift with CI/CD automation.

– **Managed $10M+ program risk portfolio** – Oversaw 54 task orders across PAC-3 Sustainment Operations. Scaled stakeholder engagement 5x (30→150+ participants), mitigating $5M+ in technical and schedule risks through data-driven analysis

Industry 4.0 Deployment Engineer, Raytheon Intelligence and Space   Oct 2020 - Apr 2022

– **Deployed smart manufacturing systems** – Built and validated Ignition SCADA solutions in live production environments

– **Enabled Factory of the Future initiative** – Delivered Industry 4.0 transformation capabilities across manufacturing operations

Mechanical Engineer, Raytheon Intelligence and Space   Jun 2019 - Oct 2020

Maintained ISO compliance – Conducted materials testing and failure analysis for defense systems

Research Technician, Texas Tech University   Aug 2017 - May 2019

– **Published peer-reviewed research** – Co-authored university publications on shape-memory materials

– **Built custom test equipment** – Designed Arduino-based systems for materials research

LEADERSHIP & MENTORING

Lead Mentor, FRC Robotics Team 3355   Ongoing

– **Mentor next-gen engineers** – Guiding high school students through robotics development cycles using Webots simulation and hands-on construction

EDUCATION

Expected Apr 2026	Master's in Software Engineering at **Southern Methodist University**	Dallas, TX
Apr 2019	Bachelor of Science in Mechanical Engineering, Minor in Mathematics at **Texas Tech University**	Lubbock, TX

CORE TECHNOLOGIES

AI/ML	Langchain, Langgraph, Model Context Protocol (MCP), Neo4j Graph RAG, Vector Databases, Google ADK
Development	Python, Java, FastAPI, Javalin, Pytest, JUnit, Pandas, SQLAlchemy
Devops	SCADA (Ignition), SQL Server, OpenShift, GitLab CI/CD, Docker, K8s, K3s, Openshift
Systems	Cameo/SysML, Enterprise Architecture, Latex, SAP/HANA, PostgreSQL
Protocols	MCP, REST, MQTT, MODBUS TCP/IP
Certifications	AWS Certified Cloud Practitioner
Security Clearance	Active Secret Clearance