

Peyton Tolbert

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PROFESSIONAL SUMMARY

Dedicated software integration and data operations professional, with a diverse background spanning nuclear, mechanical, electrical, and software engineering. Expert in SQL Database development, cloud infrastructure, and artificial intelligence.

SKILLS & ABILITIES

- Programming Languages: Python, VBA, Golang, C#/C++, Java, HTML/JS,
- Database & Backend: SQL, PostgreSQL, MongoDB, MySQL, Docker, Graph Database
- Machine Learning: Predictive Models, PyTorch, Large Language Models (LLM), NLP, Computer Vision, Reinforcement Learning (DQN, PPO), Fine-tuning
- Cloud Computing: AWS, Azure
- Tools: Microsoft Access, Tableau, VS Code, GitHub
- Methodologies: Agile, ML Ops, Continuous Delivery
- Clearance: Secret Security Clearance

Agora Research

Projects

2023-2024

Open Source Developer

- Simulation & Deep Learning: Developed a high-fidelity simulation environment for Single Architecture Ensemble with swarm control on drones. Integrated deep learning techniques for real-time environment sensing and drone control.
- Large-Scale Dataset Creation: Built and curated extensive open-source datasets across various domains, contributing valuable training data for large language models
- Cloud Infrastructure for AI: Architected and deployed a scalable cloud infrastructure for globally serving LLM applications using Terraform and Kubernetes, ensuring seamless container orchestration and optimal resource management.
- Mixture of Experts Models: Developed and integrated various Mixture of Experts (MoE) models, including lightweight transformers, and advanced the concept by combining MoE with vision transformer architectures to enhance performance and efficiency in visual processing tasks.
- Neural Network Engineering: Engineered and trained multiple neural networks to interpret and execute diverse tasks, utilizing state-of-the-art research to push the boundaries of AI capabilities in collaborative open-source environments.
- Autonomous Agent Development: Developed and deployed several autonomous agents capable of code generation, natural language processing, and performing computational tasks autonomously.
- Research Integration & Collaboration: Regularly integrated new AI research and methodologies, collaborating with the open-source community to mentor others in implementing cutting-edge technologies.

Tetrad Digital Integrity, LLC

Norfolk, VA

2023-Present

Cyber Security Database Developer

- Military Database Migration: Spearheaded the migration of multiple Microsoft Access databases to PostgreSQL, enabling a scalable, high-performance data system for enterprise-level military operations.
- Data Integration & Automation: Translated functional requirements into automated database solutions, enabling seamless data ingestion and integration from diverse sources.
- Cybersecurity Repository Management: Managed a policy repository housing cybersecurity SOPs, incident reports, and scanning results; created dashboards and models using Tableau to provide critical insights.
- ETL Pipeline Development: Built and maintained Extract, Transform, and Load (ETL) pipelines to support real-time data operations for enterprise clients.
- Ad-hoc Data Support: Delivered custom query support and insights based on user-defined functional requirements, enhancing operational efficiency and decision-making.

Huntington Ingalls Industries

Newport News, VA

2021-2023

Engineering Technician 3

- Cross-Functional Collaboration: Worked with cross-disciplinary teams to manage technical engineering projects, ensuring high-quality product delivery and stakeholder satisfaction.
- Database Management: Administered and tracked over 5,000 work orders in a dedicated database, providing real-time insights into project status and progress
- Client Coordination: Managed communication with client to ensure work completion in a satisfactory and timely manner.
- Document Auditing & Safety: Maintained critical documentation for nuclear submarine overhauls, ensuring compliance with safety and authorization procedures.

US Navy

Norfolk, VA

2015-2018

Nuclear Machinist's Mate

- Nuclear Systems Maintenance: Worked in both team and independent environments to complete over 1500 hours of rigid, procedurally oriented maintenance on Nuclear powered systems.
- Technical Training: Graduated Naval Nuclear Power School & Naval Nuclear Prototype Training Unit