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Krish Patel

Draper Scholar / AI4SE

Profiles:
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As a motivated graduate student specializing in Artificial Intelligence for Systems Engineering (AI4SE) with expertise in cloud infrastructure (AWS, Azure), Kubernetes, and IT systems, I am seeking a full-time position in a dynamic startup environment. I aim to apply my skills in AI research, cloud architecture, and systems engineering to develop innovative, scalable solutions that drive automation and optimization across digital systems

Skills

Tools and Languages	Python, Git, Amazon Web Services, Microsoft Azure, Kubernetes, Verilog, VHDL Design
Research	Intelligent Document Processing, Cloud Modeling, Natural Language Processing for Requirements Engineering

Technical Experience

Draper Scholar Program **06/2024 — Present**
Draper *Cambridge, MA*

- Leading a 2-year AI-driven thesis project to define and evaluate Technical Debt (TD) in Systems Engineering (SE) lifecycles, enabling Draper to proactively manage technical and schedule risks for optimal project outcomes.
- Developing a Retrieval-Augmented Generation (RAG) system utilizing Large Language Models (LLMs) to analyze SEMP documents and assist engineers in generating robust, requirement-driven project plans.
- Building scalable AI development environments on AWS SageMaker and Python, advancing Draper's capabilities in integrating AI into SE processes while maintaining proprietary security protocols.
- Enhancing Draper's competitive advantage for programs like the Navy's Trident Guidance System by modeling risks through AI, improving SE activity planning, and aligning with government policy compliance.
- Contributing to the broader field of digital engineering through published research and presentations, offering frameworks for incorporating TD into SE processes to improve efficiency and resilience in complex projects.

IT Intern **07/2023 — 08/2023**
ArcField *Chantilly, VA*

- Engineered a network monitoring dashboard using Icinga, leveraging an Azure GCC-H environment to ensure robust performance monitoring and system health visualization for private physical servers.
- Designed and deployed a Docker containerized solution, streamlining the implementation process and enhancing scalability for network monitoring tools.
- Optimized dashboard functionality by integrating Grafana and Prometheus, improving real-time visualization and operational insights.
- Strengthened private network security through hands-on implementation of Linux server configurations and containerized system best practices.

Grafana Prometheus Developer **06/2022 — 03/2023**
AbbVie *Chicago, IL*

- Designed and implemented network monitoring solutions for EMR clusters and other AWS frameworks using Grafana and Prometheus, enhancing system reliability and performance tracking.
- Integrated legacy applications with modern data visualization tools and cloud infrastructures, streamlining workflows and improving data accessibility.
- Strengthened user security by developing a robust understanding of LDAP implementations and access control protocols, ensuring compliance with best practices.
- Optimized cloud frameworks to support efficient system operations and proactive issue resolution, contributing to improved network performance monitoring capabilities.

Education

Master's of Science in Electrical & Computer Engineering, *Worcester Polytechnic Institute* 2024 - 2025
Bachelor's of Science in Electrical & Computer Engineering, *Worcester Polytechnic Institute* 2021 - 2024

Certifications

AWS Certified Machine Learning Specialty (AWS MLS-C01) 2025 - 2028
AWS Certified Solutions Architect Professional (AWS SAP-C02) 2024 - 2027
Microsoft Certified: Azure Solutions Architect Expert (AZ-305) 2022 - 2024
Microsoft Certified: Azure Administrator Associate (AZ-104) 2021 - 2024
Certified Kubernetes Application Developer (CKAD) 2021 - 2024