

Stephen Tarter

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[LinkedIn](#) | [GitHub](#)

Senior Software Architect | Data Engineering & AI Professional

Experienced software architect and data engineer with over 20 years of expertise in designing, developing, and deploying scalable software systems. Currently focused on advancing in AI-adjacent roles with a foundation in data engineering and recent certifications in generative AI and data engineering. Proficient in both Java and Python, with verified skills through HackerRank, showcasing adaptability to current industry demands.

Core Competencies

- **Technical Leadership:** Solution architecture, team collaboration, and strategic innovation.
 - **Data Engineering & AI:** Specialized training in generative AI, data pipelines, and cloud platforms.
 - **Software & Systems Design:** Open-source development, GIS integration, and scalable architecture.
 - **Project Execution:** Full SDLC, CI/CD, Agile & DevOps methodologies.
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Technical Skills

- **Languages:** Python (HackerRank certified in Python Basics), Java (HackerRank verified), SQL, C, JavaScript, JSON, YAML, XML, Bash.
 - **Platforms/Tools:** Kubernetes, Spring Boot, Docker, GIS (GeoServer, QGIS), Azure DevOps, Jenkins, AWS, Git, RabbitMQ.
 - **Operating Systems:** Linux, UNIX, Windows, Green Hills Embedded OS.
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Professional Experience

Senior Software Engineer

Oway | Remote | 2023 - 2024

- Served as CTO and sole engineer for an AI-focused startup, architecting a Kubernetes-based ride-sharing platform hosted on AWS.
- Designed and deployed a real-time matching system integrating MapBox for route optimization, Stripe for secure payments, and Auth0 for user authentication.
Technologies used: AWS, Kubernetes, Spring Boot, Auth0.

Senior Software Engineer

Wabtec | Fort Worth, TX | 2018 - 2023

- Led the design and implementation of electronic railway systems, enhancing safety and operational efficiency through software innovations.
- Developed the Geofence Protection for Rail Workers system, a proactive safety tool using Kubernetes and GIS integrations to protect track personnel.

Technologies used: Azure, Kubernetes, Docker, Spring Boot, QGIS, Java, C#.

Senior Software Architect

ZedaSoft | Fort Worth, TX | 2007 - 2017

- Principal architect and co-inventor of the patented Container-Based Architecture (CBA) for simulation, driving the company's simulation technology forward.
- Led high-impact projects, including cockpit simulations for military aircraft, providing cutting-edge solutions for pilot training and mission evaluations.

Technologies used: Java, GeoServer, WorldWind, PostGIS, QGIS, Tomcat, Jenkins.

Senior Software Engineer

Collinear Systems | Fort Worth, TX | 2002 - 2006

- Provided software engineering services to ZedaSoft, supporting defense simulation projects and contributing to mission-critical system designs. Transitioned into direct employment with ZedaSoft in 2007 due to a business realignment that consolidated operations.

Technologies used: Java, GIS integration, simulation architecture.

Professional Development

- *DeepLearning.AI Data Engineering Professional Certificate* - Coursera, 2024
 - *HackerRank Python (Basic) Certification* - Completed November 2024
 - *Generative AI for Software Development Specialization* - Coursera, 2024
 - *Introduction to Python Development - A Cloud Guru*, September 2024
 - *AWS Certified Solutions Architect – Associate*
 - *AWS Certified Developer – Associate*
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Patents

- **US Patent 8150664:** Container-based architecture for simulation of entities in time domain.
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Professional References

- **Keith Holt** | Former Colleague (Lockheed, Tensor, Collinear Systems, ZedaSoft)
Email: on request