

KARL HILL

AEROSPACE MISSION SOFTWARE

PLATFORM ENGINEERING · DEVSECOPS · HIGH-ASSURANCE DELIVERY

SUMMARY

Software engineering leader with 20+ years building secure, cloud-native platforms for aerospace, NASA, federal, and high-assurance environments. Hands-on architecture, DevSecOps governance, platform engineering, Agile delivery leadership, and stakeholder alignment — so teams build, test, release, and operate mission-ready software when failure is expensive.

SELECTED LEADERSHIP IMPACT

- Lead cloud-native mission software delivery across aerospace, NASA, federal, and high-assurance environments.
- Raise engineering discipline via CI/CD, release governance, PR standards, and Definition of Done.
- Reduce integration risk across multi-environment baselines — planning, traceability, and release readiness.
- Align technical execution with stakeholders across engineering, product, ops, and mission teams.

PROFESSIONAL EXPERIENCE

Staff Aerospace Software Engineer

SEPT 2025 — PRESENT

Jacobs · Chantilly, VA

- Lead cross-functional engineering execution across cloud-native mission services, CI/CD pipelines, multi-repo delivery, release readiness, and integration risk management.
- Guide team execution, onboarding, coaching, and delivery discipline while strengthening engineering quality, ownership, and accountability.
- Coordinate multi-environment release readiness across isolated and integrated systems, reducing late-stage integration risk and improving baseline alignment and traceability.
- Establish and enforce engineering standards — repo and branch governance, PR/review practices, Definition of Done, and documentation — to reduce integration risk across multi-repo and multi-environment systems.

Lead Software Engineer

DEC 2017 — SEPT 2025

SSAI / NASA Goddard Space Flight Center · Greenbelt, MD

- Architected NASA's cloud-based Flood Mapping System on AWS, delivering near real-time, satellite-derived flood products to support disaster response.
- Built a high-performance file and metadata platform on Ceph, improving virtual directory mapping and accelerating discovery and access for large scientific datasets.
- Rebuilt NASA Earth Observatory's high-traffic web platform, supporting ~1.5M monthly visitors while improving performance, UX, and SEO.
- Delivered an automated content registry workflow, boosting data collection efficiency by ~60% and accelerating researcher access to new datasets.
- Implemented DevSecOps delivery with GitLab CI/CD, Docker, and Kubernetes, enabling automated deployments, repeatable releases, and reliable stakeholder approvals.
- Led Agile delivery across teams and stakeholders, translating mission needs into roadmaps, sequencing dependencies, and driving consistent delivery.

DETAILS

Washington, DC

(202) 599-1442

karlhillx@gmail.com

LINKS

LinkedIn

linkedin.com/in/khill

GitHub

github.com/karlhillx

Website

karlhill.com

AREAS OF EXPERTISE

- Engineering Leadership & Team Development
- Cloud-Native Mission Systems
- Platform Engineering & Developer Experience
- DevSecOps, CI/CD & Release Governance
- Secure SDLC & Engineering Standards
- Architecture, APIs & Systems Integration
- Multi-Environment Delivery & Integration Risk
- Agile Delivery, Planning & Stakeholder Alignment
- Observability, Reliability & Operational Readiness

PROFESSIONAL EXPERIENCE

Senior Software EngineerJAN 2016 – DEC 2017

InformedDNA · Washington, D.C.

- Architected and delivered a Laravel-based case management platform, reducing operational costs by \$30K/year.
- Led CRM enhancements that improved retention and contributed ~15% revenue growth through better lifecycle workflows and reporting.
- Built and optimized APIs to improve database efficiency, reduce operational overhead, and increase application performance and reliability.
- Spearheaded platform upgrades and security process improvements, doubling incident response efficiency and strengthening operational readiness.

Senior Software EngineerJUN 2012 – MAR 2015

Ticomix, Inc. · Washington, D.C.

- Delivered SugarCRM solutions for 20+ clients (including Virginia Department of Transportation, Washington Redskins, and Kastle Systems), improving sales operations, visibility, and team productivity.
- Drove execution discipline to cut backlog ~90%, improving delivery predictability, product quality, and customer satisfaction.
- Built a lightweight opportunity-identification application that helped customers surface and prioritize new business opportunities.
- Collaborated effectively on distributed teams — clear async communication, strong documentation, and reliable delivery across time zones.

Earlier Engineering Experience1997 – 2012

Sabre Corporation · Dante Inc. · Visitar Inc. · Verizon Business

- Held software engineering and principal engineering roles across travel, enterprise CRM, telecommunications, managed security services, and large-scale client platforms.
- Built Java, PHP, CRM, telephony, and internal operations systems for enterprise clients including Comcast, Mastercard, Verizon/MCI, and global travel customers.
- Delivered production systems, workflow automation, client onboarding platforms, API integrations, and reliability improvements — including Finium, the multi-tenant managed-security platform that enabled a \$105M acquisition.

EDUCATION

Bachelor of Science, Computer Science coursework, University of Maryland

Associate of Arts, General Studies, Howard Community College

Project Management, Rutgers University

CERTIFICATIONS

Professional Scrum Master™ II, Scrum.org

Professional Scrum Product Owner™ I, Scrum.org

Professional Scrum Developer™ I, Scrum.org

Certified ScrumMaster® (CSM®), Scrum Alliance

TECHNICAL LEADERSHIP, PLATFORMS & ENGINEERING STACK

Languages: Python, TypeScript, Java, Bash

Cloud & Platform: AWS, Docker, Kubernetes, Helm/OCI, Cloud-Native Architecture

DevSecOps & Release: Bitbucket, GitLab CI, GitHub Actions, CI/CD, Quality Gates

APIs & Integration: REST/JSON, OpenAPI/Swagger, Service Integration, Distributed Systems

Web & Application: Node.js, React, Vite, Tailwind, Laravel/PHP

Data & Search: PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch/OpenSearch

Engineering Ops: Git, Jira, Confluence, PR/Review Workflows, Engineering Standards

AI-Enabled Engineering: Cursor, GitHub Copilot, Claude, LLM-Assisted Development