

# Karl Hill

LEAD SOFTWARE ENGINEER

## Summary

Innovative and results-driven Lead Software Engineer with over 20 years of experience in full-stack development, cloud-native solutions, and Agile team leadership. Expertise in delivering high-impact solutions across diverse industries, leveraging advanced technical skills and a passion for problem-solving to drive organizational success. Proficient in client engagement, strategic planning, and leading cross-functional teams to exceed project goals.

## Professional Experience

### Staff Aerospace Software Engineer, Jacobs, Chantilly, VA

SEP 2025 – PRESENT

- Lead Scrum for a cross-functional software team—own sprint/PI planning, delivery metrics, and stakeholder communication to keep roadmaps on track.
- Establish version-control guardrails (branching, protected merges, review standards) to reduce integration friction and elevate code quality.
- Build and maintain CI/CD with automated testing, security checks, and artifact promotion—shortening release cycles and increasing reliability.
- Standardize containerized dev/test environments and infrastructure-as-code; enable reproducible setups, ephemeral test environments, and consistent linting/pre-commit.

### Lead Software Engineer at NASA, Science Systems and Applications, Inc (SSAI), Lanham, MD

DEC 2017 – SEP 2025

- Architected NASA's cloud-based Flood Mapping System on AWS, delivering real-time satellite-derived flood data for rapid disaster response.
- Implemented a high-performance file and metadata management system using Ceph, optimizing virtual directory mapping and improving data accessibility.
- Redeveloped Earth Observatory's high-traffic website (~1.5M monthly visitors), enhancing performance, usability, and search engine visibility.
- Developed an automated content registry application, increasing NASA's data collection efficiency by 60% and enabling faster researcher access.
- Led CI/CD deployments using GitLab, Docker, and Kubernetes, ensuring seamless integration and stakeholder approvals.
- Directed Agile teams to deliver software aligned with NASA mission objectives, fostering collaboration and innovation.

### Sr. Software Engineer, InformedDNA, St. Petersburg, FL

JAN 2016 – DEC 2017

- Architected a Laravel-based case management application, reducing operational expenses by \$30K annually.
- Designed advanced CRM enhancements, increasing customer retention and contributing 15% to revenue growth.
- Developed APIs to optimize database usage and reduce operational overhead.
- Spearheaded system upgrades, doubling security incident response efficiency.

## Details

Washington, DC, 20011

202-304-5556

[karlhillx@gmail.com](mailto:karlhillx@gmail.com)

## Links

<https://www.linkedin.com/in/khill/>

<https://karlhill.com>

<https://github.com/karlhillx>

## Skills

Team Leadership

Stakeholder Engagement

Cross-Functional Collaboration

Agile Delivery

SDLC Execution

Test-Driven Development (TDD)

Object-Oriented Design (OOD)

API Design & Integration

Cloud-Native Solutions & Platforms (AWS / GCP)

Containerization & Orchestration (Docker / K8s)

Continuous Integration (CI/CD)

DevOps / DevSecOps Practices

UX / UI Development

## **Sr. Software Engineer, Ticomix, Inc., Washington, D.C.**

JUN 2012 – MAR 2015

- Delivered SugarCRM applications for 20+ clients (VDOT, Redskins, Kastle), improving efficiency and productivity across sales departments.
- Reduced backlog by 90%, enhancing software quality & customer satisfaction.
- Developed an app to help companies identify business opportunities.
- Collaborated within a distributed team, demonstrating strong remote collaboration capabilities essential for modern product development.

## **Software Engineer, Sabre Corporation, Bethesda, MD**

JUL 2010 – JUN 2012

- Built and optimized PHP applications for global travel clients, improving user experience and satisfaction.
- Translated client requirements into technical specifications, delivering customized solutions.
- Mentored junior developers, fostering a culture of growth and continuous learning.

## **Principal Software Engineer, Dante Inc., Arlington, VA**

MAY 2007 – JUN 2010

- Engineered Java solutions for industry leaders (Comcast, Mastercard), optimizing operations and increasing efficiency by 40%.
- Conducted unit and acceptance testing using Selenium to ensure software reliability.
- Delivered Scrum-based projects, achieving optimal performance metrics and team collaboration.

## **Sr. Software Engineer, Visitar, Inc., Reston, VA**

JAN 2006 – FEB 2007

- Developed a Java-based telephony application with Asterisk, enhancing SugarCRM with features like ACD, call routing, web-based IVR, and voicemail.
- Built a CRM telephony component using Flash/ActionScript, optimizing call management and handling over 1000 daily customer interactions..
- Rapidly identified and resolved technical issues, achieving a 99% reduction in system downtime.

## **Software Developer, Verizon Business, Herndon, VA**

NOV 1999 – MAR 2005

- Built NetSec's managed security-services platform, Finium, leading to a tenfold increase in client engagements and a \$105M acquisition by MCI/Verizon.
- Improved client onboarding efficiency by 75% through internal administration systems using PHP and Java.
- Key contributor to a 7+ person Java Agile team, transitioning from XP and waterfall methodologies to Scrum, enhancing software quality.

## **Education**

**Bachelor of Science, Computer Science coursework, University of Maryland**

**Associate of Arts, General Studies, Howard Community College**

## Certifications

Professional Scrum Master™ II (PSM II), Scrum.org

Professional Scrum Developer™ I (PSD I), Scrum.org

Certified ScrumMaster® (CSM®), Scrum Alliance

Project Management, Rutgers University

## Technical Skills

**Languages:** JavaScript, Python, PHP, Java, Perl, Bash

**Frameworks & Libraries:** Node.js, Laravel, React, Tailwind, jQuery, REST APIs

**Databases & Search:** MySQL, PostgreSQL, SQL Server, Oracle, Elasticsearch

**DevOps & Cloud:** Docker, Kubernetes, AWS (EC2, S3), GitLab CI/CD

**Tools & Platforms:** Git, JetBrains IDEs, Jira, Figma, Vite, NPM, Composer