

# Karl Hill

SENIOR SOFTWARE ENGINEER

## Summary

Senior technology leader with over 20 years of experience spearheading, developing, and deploying Agile solutions. Exhibits proficiency in client engagement, comprehending requirements, and delivering solutions. Proficient in full-stack engineering, working across diverse industries. Known for strategic planning, team leadership, and a commitment to staying abreast of the latest trends and technologies.

## Professional Experience

### Sr. Software Engineer, Science Systems and Applications, Inc (SSAI), Lanham, MD

DECEMBER 2017 – PRESENT

- Architected NASA's AWS-hosted Flood Mapping System for real-time satellite-based flood analysis.
- Engineered a Ceph-backed file and metadata management app with virtual directory mapping.
- Redeveloped earthobservatory.nasa.gov, a high-traffic website with ~1.5 million monthly visits, and admin system, optimizing performance, usability, and SEO.
- Architected a comprehensive automated content registry system, managing digital content types and improving data collection for NASA by 60%.
- Streamlined development by implementing CI/CD pipelines using GitLab, Docker, and Kubernetes, enabling faster and scalable software delivery.
- Led Agile teams to deliver high-quality software aligned with NASA's evolving mission objectives.

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

JANUARY 2016 – DECEMBER 2017

- Architected a Laravel-based case management application for healthcare professionals, including UI/UX design, saving \$30K in extra expenses.
- Engineered advanced CRM enhancements using innovative technologies, improving customer service and contributing 15% to revenue growth.
- Introduced custom APIs, eliminating 3 DB instances and optimizing DB usage.
- Managed system upgrades and maintenance, bolstering security and system availability, resulting in a twofold decrease in security incidents.

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

JUNE 2012 – MARCH 2015

- Crafted SugarCRM applications for 20+ clients (VDOT, Redskins, Kastle), leading to an increase in efficiency and productivity across sales departments.
- Reduced defect backlog from hundreds to 25 at product launch, enhancing product quality and customer satisfaction for a premier client.
- Created an application to assist companies in identifying business opportunities.
- Collaborated in a 10-person distributed team, demonstrating strong remote collaboration capabilities, essential for driving product development.

## Details

Washington, DC, 20011

202-599-1442

[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 Methodologies

SDLC Processes & Execution

Test-Driven Development

Object-Oriented Design

Technical Troubleshooting

Cloud-Native Solutions

Continuous Integration (CI/CD)

UX / UI Development

## Software Engineer, Sabre Corporation, Bethesda, MD

JULY 2010 – JUNE 2012

- Built and optimized PHP applications for 5 top global travel clients, improving customer satisfaction and overall user experience.
- Translated client needs into detailed technical specifications, guiding the development of customized solutions aligned with client objectives.
- Mentored junior developers, fostering an environment of continuous growth and skill enhancement.

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

MAY 2007 – JUNE 2010

- Engineered Java solutions leveraging open-source technologies for industry leaders like Comcast and Mastercard, streamlining operations and maximizing efficiency by 40%.
- Played a pivotal role in a Scrum team, driving the development and delivery of critical features, conducting thorough tests, and achieving optimal performance.
- Routinely executed comprehensive unit and acceptance testing utilizing Selenium to ensure near-flawless software performance and reliability.

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

JANUARY 2006 – FEBRUARY 2007

- Collaborated on a Java-based telephony application with Asterisk integration, enhancing SugarCRM with features such as ACD, call routing, web-based IVR, and voicemail, resulting in an improved customer service experience.
- Built a CRM telephony component using Flash/ActionScript, optimizing call management and handling over 1000 daily customer interactions.
- Rapidly identified and resolved technical issues, maintaining smooth operations and achieving a 99% reduction in system downtime.

## Software Developer, Verizon Business, Herndon, VA

NOVEMBER 1999 – MARCH 2005

- Instrumental in building NetSec's managed security-services platform, Finium, leading to a tenfold increase in client engagements, a prestigious presentation at Gartner, and MCI/Verizon's posthumous acquisition of NetSec for \$105m.
- Boosted client on-boarding efficiency by 75% by developing Finium's internal administration systems using PHP and Java.
- Key contributor to a 7+ person Java agile team, transitioning from initial XP and waterfall methodologies to Scrum, leading to increased quality.

## Education

Bachelor of Science, Computer Science coursework, Univ. of Maryland

Associate of Arts, General Studies, Howard Community College

## Certifications

Professional Scrum Master I (PSM I), Scrum.org

Certified ScrumMaster (CSM), Scrum Alliance

Project Management, Rutgers University

## Technical Skills

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

**Development Stack:** Node.js, Laravel, React, Tailwind, jQuery, REST APIs

**Data & Storage:** MySQL, PostgreSQL, SQL Server, Oracle, Elasticsearch, JSON

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

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