

Phillip A. Kahrl
Software Engineer and Architect
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Summary

Highly-experienced software engineer, developer and architect. I design and build scalable distributed systems on top of AWS, GCP and other cloud platforms. Ex-Amazon with 20+ years across various industries and technology.

Areas of Expertise

Big Data and Analytics AWS EMR and Redshift, Apache Hadoop, Spark, Postgresql and related technologies

Microservices, Web Services and APIs using Java, Scala, Node.js and Python.

Cloud Architecture and System Design Service and event-driven architecture using technologies such as AWS Lambda, SQS, Docker and container services.

Front-End and Full Stack Development JavaScript, Python, TypeScript, React, Node.js, Rust and WASM

Recent Experience

November 2021 - July 2023

Principal Engineer at Machinify

- Designed and built full stack applications that integrate human expertise and AI to automate medical claims processing at scale, save money and allow medical providers to focus on patient care.
- Scala, Apache Spark, Postgres, JavaScript, React.

February 2021 - November 2021

Staff Software Engineer at Byte Technology

- Designed and built micro-services and front-ends using TypeScript, Node.js, React and Next.js to create customer-facing applications that manage fully automated stores selling perishable products.
- Built applications for metrics, reporting, business intelligence and analytics on inventory, store performance and financials.
- Designed and built integrated microservices for payments to support all manner of payment devices for smart vending machines.
- Node.js, React, Microservices, Postgresql, Docker, Docker Swarm.

August 2018 - January 2021

Lead Engineer at Viewpath

- Built out a new engineering team as a hiring manager.
- Designed and built a new SaaS application for project management.
- Maintained and supported legacy applications.

- Provided mentoring and training to engineering team members.
- Node.js, .NET, React, GCP and AWS cloud services.

May 2018 - August 2018

Founder and Principal Engineer at Cathexis LLC

- Designed and built Weblum, a privacy-oriented photo sharing app built on top of AWS Services.

August 2016 – May 2018

Senior Software Engineer, Segment Modeling Team, Quantcast.

- Designed and built a distributed system to allow users to gain insights by querying large (30 Tb+) data sets in real time.
- Designed and built a web application to communicate with backend services visualizations on large data sets.
- Instrumental in recruiting a new engineering team.
- Java, Scala, React, Node.js, AWS Redshift, Postres SQL, Apache Spark.

October 2008 – August 2016

Software Development Engineer at Amazon

- **Amazon Fulfillment Item Data Quality** Re-engineered legacy systems to use modern web technologies, languages and cloud-based big data infrastructure. Migrated 100+ on-premise Oracle databases to a unified cloud-based platform on AWS.
- **Amazon Fulfillment Item Data Quality** Applied statistical methods and machine learning models to identify defects in orders and item measurements. Mentored peer teams in the use of big data tools including AWS Kinesis, S3 and RedShift.
- **Display Advertising** Worked on distributed ad server software to perform targeting and serving of online ads at high volume with extremely low latency.
- **Display Advertising** Designed and built front end and back end for an ad feedback system used across multiple Amazon sites.
- **Kindle Advertising** Designed and built a system to perform predictions of ad impressions on Kindle devices using large data sets and statistical prediction methods. Primary inventor on [US Patent 10,789,619](#).
- Served as a technical lead and mentor, actively involved in recruiting at all levels.

October 2003 – October 2008

Consulting Software Engineer

- **Amazon** Assisted in the migration to a new website server infrastructure for the Merchandising Applications team.
- **Walt Disney Internet Group** designed and built a system for distributing encryption keys for secure session management.
- **Chevron** Built a suite of extendable web applications for internal business processes and knowledge management.

Other Experience

1997 – 2003

Server Application Consultant

- Built custom web applications for Fortune 500 companies, consulting companies and the US Department of Defense.
- Developed end-to-end software solutions for a variety of clients from initial customer interviews, to development, testing, documentation and production support.

1993 – 1997

Surface Warfare Officer, United States Navy

- Responsible for managing and supervising up to 20 personnel composed of electronic technicians, electricians and mechanics in the maintenance of shipboard equipment.
- Assumed the highest level of responsibility and reported directly to the commanding officer for complex operations involving multiple ships and aircraft in potentially hazardous situations.

Public Portfolio

Inventions: [US Patent 10,789,619](#) Advertisement metric prediction.

Weblum: <https://weblum.photos> - Online store and progressive web application for privacy-oriented photo sharing and social networking. Built using React, Node.js and AWS serverless technologies.

Medium: <https://medium.com/@voiceofreason3141>, writing on software development

GitHub, <https://github.com/phil-kahl>, open source projects and code examples.

Tom Swifty: https://www.amazon.com/phil_kahl-Tom-Swifty/dp/B07BR14GVL. A voice skill built on the Alexa Skills Kit.

Education

University of California, Davis

Master's of Science, Mechanical Engineering, specializing in Robotics and Control Systems.

3.70/4.0 GPA, published thesis: <https://hdl.handle.net/2027/uc1.x48387>

Rensselaer Polytechnic Institute,

Bachelor's of Science, Mechanical Engineering

3.75/4.0 GPA, Summa Cum Laude

Professional Certification

Sun Certified Java Programmer for the Java 2 Platform

Principal Certified Lotus Professional (PCLP) for Domino Application Development

Open Source Contributions

Primary Architect and Programmer for RealWorkFlow- a workflow engine written in Java for the IBM Lotus Domino server available on <http://www.openntf.org/>

Primary Architect and Programmer for Notes Music Station - an MP3 library and tag editor for your IBM Notes mail client available on <http://www.openntf.org/>