

Marvin Kilp

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Senior Software Engineer and Leader

Senior software leader with 10+ years of experience architecting **AWS-based platforms** and integrating **AI-driven workflows** into production systems.

Delivered **four connected life science devices** from concept to market and transformed SaaS infrastructure to increase extensibility and speed-to-market by **40%**.

Passionate about leveraging modern cloud architecture, the **TypeScript** ecosystem, and **LLM-enhanced development practices** to build scalable, high-impact products that bridge hardware and software.

Core Expertise

- Cloud Architecture (AWS: Lambda, ECS, RDS, API Gateway, CloudFront)
- Distributed Systems & Serverless Design
- TypeScript, React, Node.js, Python
- AI & LLM Integration in Production Systems
- Connected Devices & IoT Cloud Platforms
- Engineering Leadership & Cross-Functional Delivery

WORK EXPERIENCE

MilliporeSigma • Burlington, Massachusetts, United States • 02/2022 – Present

Senior Software Development Lead

- Leading the software development of 4 connected life science small instruments based on the AWS platform.
- Took over leadership of the existing SaaS cloud platform to store data from connected instruments. Improved software delivery process and new customer acquisition by 25%.
- Enhanced extensibility and speed-to-market by 40% through reengineering the back-end SaaS architecture on AWS within 12 months.
- Spearheaded the development of cloud-based applications using a modern tech stack, including React, TypeScript, and serverless architecture, to enhance performance, scalability, and user experience for healthcare solutions.
- Utilized AI agents and LLMs to enhance code output of the software development team by 25% within 6 months, streamlining workflows and improving productivity.

Merck Group • Darmstadt, Hessen, Germany • 08/2015 – 02/2022

Senior Solutions Architect & IT Project Manager

- Efficiently managed and directed a team to develop automated data translation services, resulting in a 50% increase in efficiency for building AWS datalakes and enhancing machine learning and analytics capabilities.
- Spearheaded the design and implementation of an email service for healthcare profiles, resulting in a 30% increase in user adoption through targeted outreach strategies.
- Leading a team to develop and deploy a fully featured data analytics platform in the healthcare sector built on AWS and in Python.
- Implemented a digital interface from the Kissling Weighing System to SAP.
- Generally leading and coordinating development teams while structuring and creating unique and digital solutions for our healthcare business. All of this with deep technical skills coming from years of experience as a software engineer.

Software Engineer and Corporate Student Business Informatics

- Worked on Veeva UAT related topics. Developed Salesforce chatbot prototypes. Was responsible for the rollout of the Veeva Windows 8 App in Portugal.
- Implemented and worked on reporting dashboards for the Service Now platform
- Deployed augmented reality applications for Microsoft HoloLens, enhancing user engagement and training efficiency within 6 months.
- Developed a chatbot which was fully integrated into the Salesforce environment in the department
- Developed and prototyped a universal chatbot framework based on AWS. The goal was to enable business customers to build their own custom bots without programming knowledge

T-Systems International GmbH • Mannheim Area, Germany • 09/2012 – 08/2015

Software Engineer

- Mainly worked on dealer management systems for the Daimler and Mercedes Benz group. Supported innovation projects like bringing IBM AS400 mainframe applications to the web and mobile phones.

ARTRONIX LTD • Glasgow, United Kingdom • 08/2014 – 10/2014

Software Engineer

- Programmed robots at the University of Scotland (Artronix) for educating kids in robotics.

EDUCATION

Bachelor of Science – BS in Business Informatics

Baden-Wuerttemberg Cooperative State University (DHBW) • 01/2015 – 01/2018

CERTIFICATIONS

AWS Certified Solutions Architect – Associate • 05/2021 – 05/2028

Amazon Web Services (AWS)

AWS Certified Cloud Practitioner • 06/2020 - 06/2023

Amazon Web Services (AWS)

SKILLS

Chatbots, CI/CD, DevOps, Github, Github Actions, Node.js, SQL

Infrastructure: Amazon Web Services (AWS), Cloud Computing, Infrastructure as Code, Microsoft Azure, Pulumi, SST

Programming Languages: C#, C++, Java, Javascript, Python, QML, Qt, Typescript