# Carsten Knoblich

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# Software Architect & Team Leader/Player with 10+ years experience

Experienced software architect and mobile engineer with a proven track record in delivering high-quality iOS applications and cloud solutions for enterprise clients. Expertise spans the entire software development lifecycle with particular focus on secure mobile development, AWS architecture, and DevOps practices. Strong leadership capabilities with experience mentoring (international) teams and establishing best practices across organizations.

## **Core Competencies**

- Software Development: iOS native development (Swift, Objective-C, UIKit, SwiftUI), Python (Django), Docker
- Security: Mobile app security, OWASP MASVS, Governance & Compliance (ISO 27001, GDPR, BSI Grundschutz), applied cryptography, secure data storage, credential management
- Cloud & Infrastructure: AWS architecture, Azure, microservices, containerization, IAM
- Process & Automation: CI/CD pipelines, DevOps, Testing (unit, integration, UI), Agile methodologies
- Leadership: Team management, technical interviews, cross-functional collaboration
- Languages: German (native speaker), English (fluent), Spanish (basic)

## Certifications

- CompTIA CSAP: CompTIA Security+ (2025) & CompTIA CySA+ (2025)
- IT Security Representative with TÜV Rheinland Certified Qualification (2025)
- ISC2 Certified in Cybersecurity (2024)
- AWS Certified Solutions Architect Associate (2016 & 2024)

## **Professional Experience**

#### Freelance Software Architect & Lead Engineer

09/2017 - present

- Architected secure analytics SDK for RTL Technologies. Designed and implemented cross-platform data collection architecture ensuring data integrity and compliance throughout the tracking pipeline.
- Lead Engineer for German Corona-related applications (CWA and CovPass) with focus on test automation, security (threat modeling [STRIDE], data encryption and transport/certificate pinning) and privacy
- Defined architecture and developed apps for various companies in the german banking sector (e.g. DKB and Klarna)
- Multiple contracts for DHL to implement secure mobile applications for the 'Packstation' app (focus on authentication and secure data transfer)

Senior Consultant; permanent; EY (Ernst & Young GmbH), Berlin/Freiburg

01/2017 - 08/2017

- Participated in the Enterprise architects guild for the EY Digital Transformation team (TOGAF trained)
- Enabling teams for mobile prototype develop- & deployment; requirements analysis
- Frequent knowledge transfer with external teams and partners across the organization (presentations on secure software development & agile methodologies)
- Architecture requirements assessment & interface design between corporate backends and SAP HANA

Lead Engineer; permanent; Two Bulls GmbH, Berlin/Melbourne/New York

09/2015 - 12/2016

- Technical/Architectural lead for the german chapter for German and Australian customers in the fields of Education, Social Media, IoT and more
- Requirements analysis with customers in New York, Melbourne and Berlin (including Australian healthcare requirements)

- Established best practices for secure mobile development and cloud architecture
- Candidate assessment for internal developers and an external clients in New York, Melbourne and Berlin

## Permanent Positions; Hannover, Hamburg, Berlin

08/2011 - 08/2015

- Held progressive leadership roles in various industries
- Focus on process automation (code generation, testing & deployment), security and architecture best pracices
- Participated in due diligence processes for acquisitions in a startup environment
- Established best practices for PCI DSS compliance in a mobile payment pipeline

## **Military Service**

Sergeant (OR-5), Paratrooper; Communications Specialist; Bundeswehr, Oldenburg

07/2000 - 06/2004

## **Education**

University of Hildesheim, BSc. in Informationsmanagement und -technologie

07/2004 - 09/2009

- Coursework: Machine Learning, Cryptography (applied & math), Computer Aided Learning, Business Administration
- Additional graduate-level coursework in Machine Learning and AI (2009 2011)

# **Private Projects**

**Exoplanet Explorer** 

03/2019 - present

- iOS application to explore NASA's exoplanet database with 4.6-star rating in the Apple AppStore
- data security (on device and in transport), SSL/TLS pinning
- · custom backend implemented with Python & Docker

Home Lab 03/2020 - present

- Home lab with focus on security and automation
- Network segmentation, firewall and SIEM configuration, backup automation, secure remote access
- Applied systems management with Docker, LXC and QEMU/KVM

#### Skills – a selection

Methodologies & Frameworks: Scrum, Kanban, SAFe, Lean, DevOps

Cloud and DevOps: AWS, Docker, Kubernetes, Jenkins, Fastlane, Terraform

Operating Systems: macOS, Linux (various distributions)

Programming Languages: Swift, Python, Objective-C, Java, C, SQL, ...

#### **Hobbies**

- Photography (Street, Landscape, Drone, Astrophotography)
- Cybersecurity (CTFs, HackTheBox, Bug Bounties)