



Summary

Senior Full-Stack Engineer specializing in the architecture and delivery of complex web applications within the pharmaceutical industry. Experienced at translating intricate scientific workflows and high-variance research data into performant, accessible systems. Proven track record of owning the entire application lifecycle: from HCI-driven UX design and React/Node.js development to PostgreSQL/Prisma data modeling and OpenShift/Jenkins cloud orchestration. A collaborative lead who bridges the gap between laboratory requirements, engineering excellence, and production-grade reliability.

Skills

UX & Product Strategy: Human-Computer Interaction (HCI) | Figma | Wireframing & Rapid Prototyping | User Research | Data-Dense Interface Design | Cross-Functional Stakeholder Management

Frontend Engineering: React | TypeScript | JavaScript | State Management | Performance Optimization | Responsive Design | Frontend-Backend Integration (Redux Toolkit/REST/JSON)

Backend, Data & DevOps: Node.js | Express | PostgreSQL | Prisma ORM | API Design | OpenShift/Kubernetes (Pod Management & Secrets) | CI/CD Pipelines (Jenkins)

Experience

IT Engineer | Konitel GmbH

2018 - Present
(Long-term onsite placement at **Boehringer Ingelheim GmbH**)

Project highlight
Digital Workbench for Pipetting Assistance

System Lead & Individual Contributor (Frontend Engineering & UX)
Led the design and development of a multi-platform web application (tablet and tabletop workbench) supporting pre-clinical research laboratories in manual liquid handling workflows. The system translated complex sample preparation processes into clear, assisted application flows to reduce errors, improve efficiency, and lower physical strain for laboratory personnel.

Focus & Responsibilities
→ Owned frontend architecture and UX decisions from prototype to production
→ Designed interfaces for data-heavy, step-critical laboratory workflows
→ Integrated proprietary laboratory pipettes via experimental WebBluetooth API
→ Conducted UX research (interviews, focus groups) to validate workflows and usability
→ Collaborated closely with scientific stakeholders in regulated environments

Tech Stack
React, Ionic, Git, Jenkins, OpenShift, WebBluetooth API, UX Research, CAD & Rapid Prototyping, 3D Printing

Impact
Scaled from a single pilot to multiple laboratories within Translational Medicine and Clinical Pharmacology. Successfully reduced human pipetting errors and elevated the system from prototype to a fully validated product approved for GMP-regulated, clinically relevant sample preparation.

Project highlight
Smart & Autonomous Freezer and Storage System for Drug Discovery Sciences

Individual Contributor (Full Stack Engineering & UX)
Developed a responsive web interface for a smart, automated sample storage and retrieval system supporting drug discovery workflows. The application coordinated sample intake, automated storage, and robotic order picking for downstream analysis teams.

Focus & Responsibilities
→ Built and maintained frontend interfaces for complex logistics workflows
→ Designed UX flows for kiosk-based sample drop-off and automated retrieval
→ Integrated frontend components with APIs serving robotic and analytical systems
→ Ensured clarity and reliability for multiple user groups across several laboratoies

Tech Stack
React, Ionic, Node.js, Express, Prisma, PostgreSQL, ThermoFisher Momentum, Git, Jenkins, OpenShift

Impact
Delivered a centralized, responsive system used by both sample-producing and analysis teams. Enabled scalable communication between frontend interfaces and downstream robotic systems through a generalized API design.

Project highlight
Modernization Legacy Assay Configuration Software

System Lead Delegate & Individual Contributor (Frontend Engineering & UX)
Led the redesign and reimplementation of a legacy LabVIEW-based assay configuration system into a modern, web-based application. The goal was to democratize access to complex assay configuration workflows previously restricted to a single subject-matter expert.

Focus & Responsibilities
→ Re-architected legacy workflows into modular, web-based UI patterns
→ Designed layered user management for expert and non-expert users
→ Led UX and UI design through wireframes, user flows, and rapid Figma prototyping
→ Balanced technical constraints with usability and long-term maintainability

Tech Stack
React, Ionic, Node.js, Express, Prisma, PostgreSQL, Figma, Miro, Git, Jenkins, OpenShift

Impact
Successfully migrated legacy data while enabling integration with additional configuration systems. Expanded the user base, reduced knowledge risk, and extended the operational life of end-of-life robotic infrastructure through structured data export pipelines.

Project highlight
Mobile-First Redesign of In-Vitro Analytic Workflows

Individual Contributor (Frontend Engineering & UX)
Designed and implemented a tablet-first web application allowing lab technicians to review and edit critical study and measurement data directly within laboratory environments where desktop access was restricted.

Focus & Responsibilities
→ Adapted dense, desktop-oriented analytical interfaces to tablet form factors.
→ Prioritized clarity, touch-friendly interaction, and error prevention
→ Ensured reliable access to mission-critical data in constrained environments

Tech Stack
React, Ionic, Node.js, Express, Prisma, PostgreSQL, Figma, Miro

Impact
Delivered the longest-running production application in the portfolio, used daily by 20+ lab technicians to manage and review data across 1,000+ studies per year involving potential research compounds.

Frontend Developer - Working Student | reeliance IM GmbH

2016 - 2017

Contributed to the development of internal tools for analyzing reinsurance contracts and managing complex datasets with AngularJS and Django.

Education

M.Sc. Human-Computer Interaction (Grade: 1.3)

Julius-Maximilians University Würzburg, Dept. of Computer Science
2020-2024

Focus on Human-Centered Design and software engineering for complex, real-world systems.
Thesis: Evaluating the Effect of AR Assistance on Task Performance in Manual Liquid Handling — industry-evaluated with Boehringer-Ingelheim; awarded Best Presentation for technical demo and academic poster.

Exchange Semester – Department of Industrial Design

Yeungnam University, Daegu (South Korea)
SS 2022

Hands-on design studies beyond software, including textile design and furniture design, culminating in a full-scale, self-designed and fabricated furniture piece.

Professional Scrum Product Owner (PSPO I)

Scrum.org
2020

Credential ID: 499629
[Certificate Link](#) | Recipient verification: sascha.lange@online.de

B.Sc. Human-Computer Interaction (Grade: 2.2)

University of Hamburg — Dept. of Computer Science
2013 - 2018

Thesis: Virtual Fixtures in VR Teleoperation — experimental study on feedback mechanisms in robotic control systems; results contributed to an academic publication.

Languages

German	English
Native	Fully bilingual EFSET English C2 (2019) Certificate Link

Public Personal Project

AR Image Target Generator

saschalange.github.io/Image-Target-Generator

Built a web utility to generate high-performance tracking markers for XR applications. Optimized for dense feature distribution to ensure high alignment accuracy in marker-based AR systems such as Unity Application using the Vuforia SDK.