

Tristan Teufel

Software Architect (Freelancer)

Business Informatics (B.Sc.)



14 years of experience

2M+ installs (vscode-jest-runner)

Remote & on-site



Online version
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🌐 LinkedIn

Career Summary

Senior Software Architect & Developer Experience Expert with over 10 years of experience in designing and implementing complex enterprise applications.

Open-Source Development

As creator of the globally-used open-source tool 🛠️ [vscode-jest-runner](#) (> 2M downloads, official [NX recommendation](#)) I have deep expertise in building scalable test infrastructure and high-performance developer tools. My focus lies on connecting Clean Architecture with modern test automation to minimize technical debt and sustainably accelerate release cycles in critical environments.

Technical Expertise

- **Architecture & DevEx:** Specialization in sustainable software architectures, high developer productivity, clean-code principles, and scalable cloud-native solutions.
- **Quality Engineering:** Deep understanding of internals of modern test runners; lead-level expertise in ⚡ [Vitest](#), 🎯 [Playwright](#), 🦊 [Jest](#) and 🕸️ [Cypress](#).
- **Agentic Engineering:** Pioneer in utilizing agentic workflows ([AI Claude Code](#), [GitHub Copilot](#), [Gemini](#)) for orchestrating complex refactorings and architecture validations.
- **Modern Stack & DevOps:** Lead expertise in [React](#), [Angular](#) and monorepos; full-lifecycle experience with CI/CD pipelines and container orchestration.

Development Philosophy

Sustainable software is built through simplicity. I create systems that stay at the cutting edge of technology while dramatically reducing long-term maintenance costs for organizations.

Skills

LANGUAGES

 TypeScript ●●●

 JavaScript ●●●

 Node.js ●●●

 Python ●●●

 Java ●●●

 Go ●●●

 C# ●●●

LIBRARIES

 React ●●●

 Solid.js ●●●

 Gatsby ●●●

 Astro ●●●

 Svelte ●●●

 Angular ●●●

 Vue ●●●

 Next.js ●●●

 NestJS ●●●

 Nx ●●●

STYLING

 CSS ●●●

 SCSS ●●●

 Tailwind CSS ●●●

 styled-components ●●●

DATABASES

 MongoDB ●●●

 SQL ●●●

APIS

 REST ●●●

 JSON-RPC ●●●

 WebSocket ●●●

 OpenAPI ●●●

 GraphQL ●●●

 SOAP ●●●

 gRPC gRPC ●●●

 MQTT ●●●

TESTING

 Jest ●●●

 Vitest ●●●

 Cypress ●●●

 Playwright ●●●

 Selenium ●●●

CLOUD

 AWS ●●●

 Azure ●●●

CONTAINER

 Docker ●●●

 Podman ●●●

 Kubernetes ●●●

CI/CD

 GitHub Actions ●●●

 GitLab ●●●

 Travis ●●●

 Jenkins ●●●

BUILD-TOOLS

 Webpack ●●●

 Vite ●●●

 Nx ●●●

 Babel ●●●

AI TOOLS

 GitHub Copilot ●●●

 Claude Code ●●●

 Gemini CLI ●●●

VERSION CONTROL

 GitLab ●●●

 GitHub ●●●

 Subversion ●●●

 Bitbucket ●●●

 Gerrit ●●●

METHODOLOGY

 Scrum ●●●

 Kanban ●●●

 Agile ●●●

 Waterfall ●●●

☐ Core skill ●●● Expert ●●● Intermediate ●●● Basic knowledge

Project experience

03/2026 – 12/2026 ○ Development of the CMS Platform for the Websites of the Sparkassen

S-Communication Services GmbH

Düsseldorf & Berlin/DE | freelance via Etengo AG | Remote

Full-Stack Developer

- Development of new features and bug fixing in the CMS platform for sparkasse.de and the websites of the Sparkassen.
- Development of a multi-tenant CMS architecture with more than 20 tenants based on a shared CMS root.
- Bug fixing and development in the company's own Strapi fork.
- PostgreSQL schema changes and creation of database migrations for Strapi adjustments.
- Development of the React frontend and its component library.
- Implementation of accessible components according to BITV 2.0 and WCAG 2.1 with focus on keyboard navigation, ARIA attributes, and screen reader compatibility.
- Suggestions for improving the CI/CD pipelines.

TypeScript · Node.js · Strapi · NestJS · Knex.js · React · Material UI (MUI) · PostgreSQL · SQL · REST · Jest · Playwright · WCAG · ARIA

05/2025 – 02/2026 ○ Development of the Care Level Calculator and Online Portal for Pflegeabc.de

Pflegeabc GmbH

Hamburg/DE | direct contact | Scrum | Remote

Full-Stack Developer

- Implementation of Figma designs in Next.js with React and Tailwind.
- Implementation of a localization library for Next.js with SSR, compatible with Pages Router and offering the same API as i18next.
- Extension of a graphically extensive result PDF for the care level calculator with React-PDF.
- Implementation of a file watcher and live reload for React-PDF server-side generation.
- Continued development of the new care level calculator funnel.
- Co-development of a Playwright test suite for the new care level calculator.
- Database and schema extensions with Prisma and SQL.
- Prototypical refactoring of the new care level calculator funnel to file-based routing.
- Implementation of new pages with Storyblok CMS and integration with Next.js.
- Accessible components according to BITV 2.0 and WCAG 2.1.

TypeScript · Node.js · React · Next.js · Tailwind CSS · Prisma · Storyblok · React-PDF · SQL · Playwright · REST · Figma · GitHub · WCAG · ARIA

06/2025
– 02/2026

○ Development and Testing of the FIS3 Controlling Application

Bundesagentur für Arbeit (Federal Employment Agency)

Nuremberg/DE | freelance via nemensis AG and Atos SE | Scrum | Remote

Frontend and Backend Developer

- Full-stack development of features with Angular (frontend), C# (backend), and Microsoft SQL Server (database).
- Upgrade of two Angular enterprise projects from version 15 to 21.
- Migration of the Angular projects to standalone architecture.
- Resolution of circular dependency problems that prevented the upgrade.
- Correction of faulty imports and dependencies to reduce bundle size through tree shaking.
- Migration from Webpack to Vite to reduce build times.
- Creation of a unit test suite with Vitest.
- Implementation of multiple Playwright test suites including MSAL login, CI/CD integration, and test coverage reports.
- Accessible components according to BITV 2.0 and WCAG 2.1.
- Development and customization of T-SQL functions in Microsoft SQL Server.
- Design and implementation of the migration of a JavaScript-based Flex layout to CSS.

TypeScript · C# · Node.js · .NET · ASP.NET · Angular · SQL · Microsoft SQL Server · Playwright · Vitest · Vite · Webpack · REST · Azure · MSAL · GitHub · Jenkins · GitHub Actions · WCAG · ARIA

05/2024
– 03/2025

○ Implementation and Integration of Apps in the DHL Business Customer Portal

DHL ITs | Deutsche Post DHL Group

Bonn/DE | freelance via Grey Solutions and Ilume | Scrum | Remote

Implementation of Automation Verification for Advertising Mail in the DHL Business Customer Portal

Lead Frontend Developer

- Pixel-perfect implementation of Figma designs into React components.
- Integration of backend systems using REST APIs, OpenAPI, and Tanstack Query (React Query).
- Setup and configuration of the automation verification frontend project.
- Integration of the automation verification into the business customer portal using Single-SPA (microfrontend architecture).
- Creation of build scripts for single-page applications (SPA) and microfrontends.
- Development of a test suite with Playwright for automation verification.
- Accessible components according to BITV 2.0.
- Knowledge transfer and training of team members in React and TypeScript.

Integration of the Print Mailing Planner into the DHL Business Customer Portal

Frontend Developer

- Support with the integration of the Print Mailing Planner (an Angular 17 application) into the DHL Business Customer Portal.
- Optimization of build scripts regarding Single-SPA.
- Implementation of SSO login with Keycloak.js for the Print Mailing Planner in the DHL Business Customer Portal.
- Participation in developing a Playwright test suite for the Print Mailing Planner.

TypeScript · Node.js · SQL · React · TanStack Query · Angular · PrimeNG · Tailwind CSS · Jest · Playwright · Emotion · REST · OpenAPI · Azure · Docker · OpenShift · Figma · GitHub · Jenkins · GitHub Actions · Webpack · Vite · WCAG · ARIA · A11y Testing · Keycloak

04/2024 – 08/2024 ○ Development of a Data-Driven Recruiting Tool

JLA Finance GmbH

Frankfurt/DE | freelance | Remote

Lead Developer

- Creation of a validated input component with React-Hook-Form for systematic collection and processing of report data.
- Development of a Headless CMS with Strapi for flexible content management.
- Integration of Azure Databricks using Databricks SDK in Python.
- Generation of PDF reports with Python and LaTeX.
- Provision of REST APIs using FastAPI.
- Generation of React Query hooks based on OpenAPI specifications.
- Implementation of Azure MSAL Single-Sign-On (SSO) for the application.
- Integration of Azure Blob Storage for PDF report storage.
- Deployment of the application in Azure using Azure Container Registry (ACR) and Docker-Compose.
- Creation and configuration of an Azure Web App for Containers to operate the application.
- Automation of deployments through CI/CD pipelines with GitHub Actions.

TypeScript · Python · Node.js · React · FastAPI · Strapi · Emotion · REST · TanStack Query · PostgreSQL · Azure · MSAL · OpenAPI · Docker · GitHub Actions · Vite · Docker Compose

09/2023 – 04/2024 ○ Development and Testing of Web Applications with Focus on AWS Orchestration

RWE AG

Essen/DE | freelance via Source and Haze | Scrum | Remote & On-Site

Test Automation Expert

- Development of Cypress frontend integration tests.
- Creation of unit tests with Jest.
- Migration of C# unit tests from NUnit to XUnit.
- Development and testing of stateless functions in AWS Lambda and their integration into AWS Step Functions.
- Refactoring of existing functions in AWS Lambda.
- Integration of TypeScript and Cypress in the CI/CD pipeline.
- Setup of a solution for local and shared Cypress commands in an Nx monorepo.
- Test-driven development of new components with Angular 17.

TypeScript · C# · .NET · ASP.NET · Node.js · Angular · Angular Material · SCSS · Cypress · Jest · MongoDB · GraphQL · Azure · AWS · MSAL · Nx · Apollo · Webpack · Vite · Docker · Terraform

- 07/2023 – 08/2023
- Implementation of an Interactive Chat System for a Virtual Assistant Using a Large Language Model (LLM)**
- CTREAM GmbH
Mainz/DE | freelance via freelancemap.de | Scrum | Remote
- Lead Frontend Developer**
- Setup of a Next.js project infrastructure.
 - Conversion of Figma mockups into reusable React components with MUI.
 - Implementation of reactive chat components with MUI.
 - Message rendering in sections to optimize performance.
 - Integration of Text-to-Speech functionality.
 - Provision of the output package as a WebComponent for integration into websites.
 - Integration of WebSockets with a Python backend for real-time communication.
- TypeScript · React · Next.js · Node.js · Material UI (MUI) · WebSocket · Python · Flask · AWS · styled-components · TanStack Query · Figma
- 10/2022 – 06/2023
- Creation of User Interfaces in the Field of Telecommunications Surveillance**
- ATIS® Systems GmbH
Bad Homburg/DE | freelance via Solcom GmbH | Kanban | Remote & On-Site
- Lead Frontend Developer**
- Setup of a React/TypeScript project using Nx-Tools.
 - Development of UI components based on Figma designs with React and MUI.
 - Implementation of Cypress tests that automatically record API responses and use them as mock data.
 - Configuration of a Webpack API proxy to bypass the Same-Origin Policy.
 - Configuration of TypeScript code generation for OpenAPI endpoints.
 - Customization of MUI components according to customer requirements.
 - Integration of a Jenkins pipeline with GitLab and Rocket Chat.
- TypeScript · React · Node.js · Cypress · Material UI (MUI) · TanStack Query · OpenAPI · Nx · Leaflet · Recharts · Jenkins · react-beautiful-dnd · Figma · Webpack · GitLab
- 01/2021 – 09/2022
- Participation in the development of the HConnect product suite from Heidelberg Materials AG**
- Heidelberg Cement AG - today Heidelberg Materials AG
Heidelberg/DE | freelance via Etengo AG | Scrum | Remote & On-Site
- Frontend Developer of the Authentication & User Management**
- Creation of Cypress tests and integration into GitLab pipelines.
 - Automated creation of code coverage reports and test results for Cypress, integrated into Jira X-Ray.
 - Enabling of out-of-source imports in a CRA 4 monorepo.
 - Migration of the monorepo from TSLint to ESLint and Prettier.
 - Test-driven development in the area of user management and authentication for the HConnect product suite.
 - Implementation of an Nginx reverse proxy Docker container for the React router.
 - Realization of live SAS token creation for build scripts in the Azure cloud.
 - Proof of concept (PoC) for migrating from Yarn 1 to Yarn 2 with Zero Install and PnP.
 - Development of Node.js build scripts with Azure CLI and AzCopy to automate deployment processes.
- TypeScript · C# · .NET · Node.js · React · Redux · Cypress · Jest · Testing Library · Material UI (MUI) · TanStack Query · Azure · X-Ray · GitLab · Nginx · Webpack · Docker

- 10/2020 – 12/2020
- Creation of the Klarsolars solar panel configurator**
- Klarsolar GmbH
Stuttgart/DE | freelance via Pixelschupser GmbH | Scrum | Remote
- Lead Frontend Developer**
- Setup of a new project using Nx tools.
 - Development of custom components for the configurator in Angular 10.
 - Customization of Angular Material components using Tailwind CSS.
 - Data migration from the old configurator.
 - Integration of a GraphQL API with the Apollo client.
- TypeScript · Angular · Node.js · Angular Material · Tailwind CSS · GraphQL · Apollo · GitHub · Webpack · Nx
- 01/2020 – 09/2020
- Modernization of user interface for SupplyOn AG in the automotive industry**
- Seeburger AG
Bretten/DE | freelance via it-experts | Kanban | On-Site
- Backend & Frontend Developer**
- Implementation of Figma designs into modular React components with MUI, including customization of MUI components.
 - Creation of extensive tests with React Testing Library and Jest.
 - Definition of new Dependency Cruiser rules to ensure the Dependency Inversion Policy.
 - Implementation of an approach to integrating a PWA (Progressive Web App) into an existing monolith.
 - Development of web services with JAX-RS and adding OpenAPI annotations.
 - Creation of a custom filter for AG Grid.
- Java · Spring Boot · Node.js · OpenAPI · TypeScript · React · Redux · Testing Library · Jest · Material UI (MUI) · AG Grid · Figma · Gerrit · Webpack
- 10/2019 – 12/2019
- Development of chat components for TeamViewer chat**
- Teamviewer GmbH
Göppingen/DE | freelance via gulp.de | Scrum | Remote & On-Site
- Frontend Developer**
- Refactoring and update of the project's toolchain.
 - Introduction of a component-based architecture.
 - Transformation of Figma layouts into functional chat components.
 - Development of special chat functionality components.
 - Implementation of a technological approach for lazy loading of an emoji picker.
- Knockout.js · TypeScript · Node.js · Webpack · C# · .NET · Bitbucket · Figma
- 07/2019 – 09/2019
- Conception and development of a configurator for drugstores in cooperation with Procter & Gamble**
- Procter & Gamble (P&G)
Karlsruhe/DE | freelance via typzwo GmbH | Kanban | Remote
- Lead Frontend Developer**
- Introduction of JSX and rendering functions in Vue.js.
 - Division of components according to the atomic design principles.
 - Implementation of schema extensions in MySQL.
 - Development of special components for the configurator.
- TypeScript · PHP · Node.js · Laravel · Vue · Webpack · JavaScript · SQL · Bitbucket

- 10/2017 – 06/2019 ○ **Dashboards for Daimler AG: Visualization of metrics and key figures in production**
 ETECTURE GmbH
 Karlsruhe/DE | freelance via xing.de | Kanban | Remote & On-Site
Lead Backend & Frontend Developer
- Creation of a new build system with Webpack.
 - Development of a new starter kit for React.
 - Setup of a Node.js backend using Sequelize and PostgreSQL.
 - Integration of OpenAPI and setup of Swagger UI for the middleware.
 - Setup of a Jest snapshot test suite.
 - Implementation of JSON Web Token authentication in the middleware.
 - Creation of Docker Compose files for build scripts.
 - Setup of Docker clusters with a reverse proxy (Traefik).
- TypeScript · React · Redux · Jest · Webpack · Node.js · NestJS · SQL · Docker · REST · OpenAPI · Kubernetes · Helm · GitHub · Reselect · Immutable.js · Traefik · Sequelize · PostgreSQL
- 05/2017 – 09/2017 ○ **Participation in the development of a new game launcher for Gameforge AG**
 Gameforge AG
 Karlsruhe/DE | freelance via Gulp.de | Scrum | On-Site
Backend & Frontend Developer
- JavaScript · Angular · React · Redux · SCSS · REST · Docker · Kubernetes · Helm · Node.js · NestJS · Go · Bitbucket · Webpack · OpenAPI
- 01/2017 – 04/2017 ○ **Backend development of an innovative scheduling system for medium-sized companies**
 Timify - today Termin App GmbH
 Munich/DE | freelance via Etengo AG | Scrum | Remote & On-Site
Backend Developer
- JavaScript · Node.js · MongoDB · hapi · GitHub · Webpack
- 03/2016 – 12/2016 ○ **Composition of Angular components and deployment in a design system library**
 Cyber Manufactory GmbH
 Karlsruhe/DE | freelance via Cyberforum e.V. | Scrum | Remote & On-Site
Frontend Developer
- JavaScript · Go · Angular · Node.js · jQuery · PHP · Bitbucket · WordPress · Webpack
- 01/2015 – 12/2015 ○ **Java 8 development in a Java Enterprise application for receivables management at arvato**
 arvato Financial Solutions - Bertelsmann SE & Co. KGaA
 Baden-Baden/DE | Permanent employment | Waterfall | On-Site
Backend Developer
- Java · Maven · JUnit · SQL · Oracle SQL Developer · Subversion · Groovy

09/2012 ○ **Software development and enterprise application integration at ec4u expert**
– 12/2014 **consulting AG**

ec4u expert consulting AG - today DIGITALL

Karlsruhe/DE | Permanent employment | Scrum | On-Site

Backend & Frontend Developer

JavaScript · Go · jQuery · Maven · PHP · Python · Oracle ADF · Selenium · SoapUI · SQL · Oracle SQL Developer ·
Java · Oracle SOA Suite · Cordova · REST

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