

Martin Zachoszcz

Sr. Software Engineer

Passionate Software Engineer with years of experience in creating complex applications, libraries and build tools for developing various software with web technologies.



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Berlin, Germany

Expertise

- TypeScript
- JavaScript
- NodeJS
- React

Certificates

AWS Associate Developer

Education

Masters in Human Factors

Technische Universität Berlin

2014 - 2017

B.Sc. in Psychology

Friedrich Schiller Universität Jena

2011 - 2014

Associate Engineer in Data Technology

Siemens Professional Education

2008 - 2010

Languages

German ●●●●●

English ●●●●○

Polish ●●●○○

Interests

Sports

Chess

Gaming

Employee Experience

Sr. Software Engineer

2016 - 2021

Key Responsibilities:

- Led the development and maintenance of a comprehensive software development kit (SDK) for vehicle infotainment systems across the Volkswagen Group.
- Spearheaded the creation of a white-labeled UI library, enhancing brand identity and user experience across various vehicle models.
- Played a pivotal role in architecting and implementing scalable and maintainable software solutions, improving development processes and product quality.
- Acted as a primary problem-solver and innovator for web app platforms within vehicles, leveraging advanced technologies and methodologies.

Selected projects:

Whitelabeled UI Library

Angular 7-12

TypeScript

SCSS

Jasmine/Karma

Protractor

Frontend

Cross-Platform Theming

Modular Development

Test-Driven-Development

Developed a dynamic, theme-driven UI library, ensuring brand consistency across Volkswagen Group's vehicle fleet. Focused on robust unit and E2E testing to guarantee high-quality, scalable front-end components.

Desktop Applications for Debugging and Testing

ReactJS

NodeJS

Electron

Fullstack

Microservice Architecture

Real-Time Data

Engineered advanced desktop applications using ReactJS and NodeJS with the Electron framework. These applications interfaced with vehicle microservices, simulating complex car environments for efficient web app testing.

Low-Level Communication Library using ViWi Protocol

TypeScript

NodeJS

ExpressJS

RxJS

Jest

Backend

IoT

REST

WebSocket

Test-Driven-Development

Implemented a low-level communication client-side library using NodeJS, ExpressJS, and TypeScript, accessing servers using the ViWi protocol for efficient HTTP and WebSocket communications. This system revolutionized data handling in vehicle services, exemplifying cutting-edge IoT integration.

Car Functionality Abstraction Library

TypeScript

NodeJS

RxJS

Jest

Backend

API Design

Microservices

Reactive Programming

Test-Driven-Development

Architected a TypeScript-based library with RxJS, abstracting car functionalities into accessible microservices. This innovative API design facilitated seamless interaction with various car features, enhancing app development efficiency.

Mono Repository Management

Angular CLI

Webpack

Babel

Docker

Monorepository

Continuous Integration

Scalable Build Systems

Custom Tooling

Containers

Orchestrated multiple large-scale projects within a mono-repository setup, incorporating Angular CLI, Webpack, and Babel. Developed custom Angular Builders and Schematics, akin to Nx, tailored for automotive environments.

Automated Documentation

TypeScript

NodeJS

Confluence API

Custom Documentation Generators

PostgreSQL

JSDoc

Automated Documentation

Knowledge Management

Databases

Innovated an automated documentation system, integrating JSDoc with custom tooling to generate comprehensive, structured content for Confluence and a dedicated web application. This solution ensured up-to-date, accessible documentation for every release.

Release Process and Testing Strategies

NodeJS

Automated Testing Tools

Jenkins

CI/CD

DevOps

Test-Driven-Development

Managed a complex bi-weekly release process for over 60 libraries, encompassing desktop tools, test web apps, and comprehensive documentation. Ensured reliability through a meticulous testing, fully automated in CI/CD pipelines.



Freelancing Experience

Digitalizing paper forms with micro frontends

01/2022 - 09/2022

Key Responsibilities:

- Digitalized paper forms into an Angular-based web application with reactive forms, improving stakeholder information exchange.
- Architected a monorepository framework for micro-frontends with Nx Workspaces, elevating project synergy and optimizing development processes.
- Enhanced micro-frontends with tests and new features; crafted a library of scalable, reusable components for streamlined development.

Tasks:

Monorepository for Micro-Frontends

Nx Workspaces

NodeJS

Webpack

Jest

Cypress

PostgreSQL

Architectural Design

DevOps Integration

Micro-Frontends

Monorepository

Scalable Build Systems

Databases

Led the design and implementation of a monorepository architecture tailored for micro-frontends, utilizing Nx Workspaces for enhanced project orchestration and workflow efficiency. Emphasized a seamless development experience by integrating streamlined build processes with Webpack, resulting in a robust, highly optimized, and future-proof frontend ecosystem.

Feature Development and Library Enhancement for Micro-Frontends

Angular 12-14

TypeScript

RxJS

Jest

NgRx

Angular Material

Storybook

Frontend

Micro-Frontends

Component Library Expansion

Accessibility

Scalable & maintainable components

Library documentation

Contributed to the development of key features in a micro-frontends-based application, using Angular for front-end efficiency and consistency. Focused on expanding and refining an accessible library of reusable components, enhancing the application's modularity and maintainability.

End-to-End Testing of defined feature set

NodeJS

Cypress

Jenkins

Docker

End-to-End Testing

CI/CD Automation

Quality Assurance

Testing Integration

Containers

Developed comprehensive end-to-end testing for the micro-frontend application, leveraging Cypress for realistic user interaction simulations. Successfully integrated these tests into the CI/CD pipeline, ensuring automated test execution for each pull request and deployment.



Mentor and Coach for Fullstack bootcamps

10/2022 - 03/2023

Key Responsibilities:

- Crafted and delivered comprehensive, hands-on course material for a dynamic 3-month fullstack bootcamp, focusing on real-world application development.
- Guided and mentored over 10 students in developing intricate final projects, providing expert advice on project planning, structuring, and execution using a wide array of web technologies.

Tasks:

Fullstack Development Coach and Mentor

JavaScriptReactJSVueJSNodeJSExpressJSNextJSReduxPostgreSQLMongoDB

Fullstack ExpertiseInteractive TeachingProject Lifecycle ManagementJavaScript Ecosystem

Database EngineeringState Management

Orchestrated an immersive learning experience for bootcamp students, covering both frontend and backend technologies over a rigorous 3-month period. This comprehensive program was meticulously crafted to bridge the gap between theoretical knowledge and practical skill, equipping students with the tools and insights necessary to thrive in today's dynamic tech landscape.

Fullstack Project Mentor

React NativeSvelteReactJestCypressWebSocket

Contextual AgilityAdvanced Debugging TechniquesCreative Problem SolvingGame Development

Mobile Development

Empowered students in conceptualizing and developing complex fullstack applications, fostering a deep understanding of technology integration and real-world problem solving. My guidance was instrumental in nurturing their technical acumen and creativity, enabling them to craft innovative solutions and confidently tackle the challenges of modern web development.

Program Development Lead

JavaScriptTypeScriptNextJSMongoDBReactStyled ComponentsJest

Curriculum DevelopmentIndustry Trend AdoptionEducational Infrastructure

Initiated the adoption of a modern curriculum, aligning educational content with the latest industry trends. Played a key role in the infrastructure setup on GitHub and became the inaugural instructor for this modernized syllabus.



Revamping Spiced Academy's Online Platform

spiced-academy.com

04/2023 - 07/2023

Key Responsibilities:

- Led a complete overhaul of the spiced-academy.com website, implementing a new, modern design with enhanced functionality and user experience.
- Integrated a dynamic CMS for content customization and streamlined content management, and incorporated a separate blog and dynamic events page synchronized with EventBrite.
- Optimized website performance and SEO, ensuring fast load times, improved search engine rankings, and an overall increase in user engagement and satisfaction.

Tasks:

Dynamic CMS Integration

Contentful API

GraphQL

EventBrite API

CMS Customization

Dynamic Content

Content Workflow Automation

Engineered a flexible content management system, allowing for dynamic content updates and streamlined content workflows.

NextJS Frontend Development

TypeScript

NextJS

TailwindCSS

GraphQL

Responsive Design

Modern Web Practices

UI/UX Enhancement

Developed a responsive and modern web interface using NextJS & TailwindCSS, incorporating custom content from the CMS.

Backend Integration and Migration

NodeJS

TeamTailor API

RESTful API

Backend Integration

System Migration

Data Synchronization

Facilitated seamless backend integration, aligning website interactions with the existing system and transitioning to a new backend provider.

Optimizing Performance and SEO

NextJS

Vercel

SEO Tools

Performance Optimization

SEO Best Practices

Automated Sitemap Generation

Implemented performance optimizations including image handling, and automated SEO enhancements like sitemap generation.