



Software Architect/Developer

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PROGRAMMING LANGUAGES

- TypeScript
- C#
- Kotlin
- JavaScript
- Java
- Python
- Rust
- Go
- Dart
- Solidity
- PHP

AI / LLM

- Claude Code
- Claude API (Anthropic SDK)
- Prompt Engineering
- Vercel AI SDK 7
- MCP (Model Context Protocol)
- RAG / Embeddings

FRONTEND

- Vue.js / Nuxt
- React / Next.js
- Angular
- Svelte / SvelteKit
- rxjs
- ngrx
- EmberJS
- GraphQL
- Flutter

BACKEND

- Bun (Hono, Elysia)
- Kotlin/Java (KTOR, Spring)
- Node.js (express, koa, nest.js)
- C# (ASP.net core)

TESTING

- Vitest
- Playwright
- Cypress
- JUnit
- Testcontainers

TOOLS

- Docker
- Kubernetes
- webpack
- rollup

DATABASES

- PostgreSQL
- Redis
- MongoDB
- Elasticsearch
- MySQL
- MariaDB
- MS SQL Server

highlighted = current focus

LANGUAGES

- German (Native)
- English (Fluent (business))
- Swedish (Basic)

Daniel Hartmann

Software Architect/Developer · 25+ years of experience in software development & architecture

PROFILE

Daniel Hartmann is a software architect and full-stack developer with around 25 years of experience designing and delivering business-critical applications. He owns architecture across the whole stack – from frontends in Vue/Nuxt, React and Angular through backends in C#/.NET, Kotlin and TypeScript to operations on Kubernetes. Most recently he was responsible for the architecture of a cross-state digitalisation programme for school authorities, coordinating the development team there; since July 2026 he has worked full-time as architect and sole developer on Reynt, a multi-tenant rental and booking platform in production. AI-assisted software development is a particular focus: he orchestrates autonomous coding agents in the development process and builds AI features such as tool-using agents and document-grounded assistance into products. Data protection and tenant isolation are part of the architecture from the outset. His approach is written down – 16 patterns, each with the shipped code that demonstrates it and what it costs:

octabits.io/approach

EXPERIENCE

Software Architect/Developer

[Octabits \(DK2 Ventures UG\)](#) · since 12/2021 · part-time, full-time since 07/2026

In-house product Reynt – architecture and full-stack development of the rental and booking platform as sole developer, AI-assisted throughout (Claude Code, Claude API)

- TypeScript
- Bun
- Hono
- Nuxt 4
- Vue 3
- React
- Angular
- Node.js
- Kotlin
- Java
- Python
- Solidity
- Blockchain
- HTML
- CSS
- Tailwind
- REST
- GraphQL
- CI/CD
- Docker
- Kubernetes
- PostgreSQL
- Redis
- MongoDB
- Dart/Flutter
- OAuth 2.0

Software Architect/Team Coordinator

[LMZ BW](#) · 07/2024 – 06/2026

MUSES (DigitalPakt) – managing and configuring school IT infrastructure for school authorities in Baden-Württemberg, North Rhine-Westphalia and Saxony. Technical coordination of a development team of three to five

- C#
- .NET 9
- TypeScript
- JavaScript
- React
- Next.js
- Vite
- Rust
- Node.js
- HTML
- CSS
- REST
- CI/CD
- Azure Pipelines
- Docker
- Kubernetes
- Terraform
- FluxCD
- MySQL
- Redis
- OAuth 2.0
- Tailwind

CTO, Lead Architect/Developer

[Hoovi GmbH](#) · 05/2021 – 06/2024

Overall technical responsibility and build-up of the SaaS platform – from architecture and technology selection through building and leading a team of four developers to product development

- Kotlin
- Java
- C#
- TypeScript
- JavaScript
- Python
- Solidity
- Blockchain
- React
- Angular
- Vue.js
- Svelte
- Node.js
- HTML
- CSS
- REST
- GraphQL
- CI/CD
- Docker
- Kubernetes
- PostgreSQL
- Redis
- MongoDB
- Dart/Flutter
- OAuth 2.0

Lead Software Architect

[n-fuse GmbH](#) · 07/2016 – 02/2021

Full-stack architecture and development for various client projects. Definition of frontend tooling, component libraries and technology stack

- TypeScript
- JavaScript
- Angular
- Vue.js
- HTML
- CSS
- rxjs
- GraphQL
- REST
- Docker
- Elasticsearch
- PostgreSQL
- Redis
- webpack
- Node.js
- Dart/Flutter

Senior Developer

[n-fuse GmbH](#) · 05/2012 – 06/2016

Development of single-page applications, libraries and internal tools for various client projects

- TypeScript
- JavaScript
- C#
- Java
- JSF
- Angular
- Ember
- HTML
- CSS
- GraphQL
- REST
- Docker
- webpack
- Node.js

Reynt – Multi-Tenant Rental & Booking Platform

Architect & Sole Developer (AI-assisted) · Octabits · since 2024 · [reynt.co](#)

Octabits in-house product: a GDPR-compliant multi-tenant SaaS “made in EU”, built as sole developer and in production since 2025

- **Architecture** · a pnpm/Nx monorepo of 13 packages, four Hono APIs (type-safe hc clients, hand-written operator SDK), three Nuxt 4 frontends, an Astro marketing/docs site and a headless SDK
- **Tenant isolation** · “by construction” via PostgreSQL row-level security; PII encrypted at rest under a per-tenant age keypair (X25519), the private key held by a swappable master-key provider, searchable via keyed blind indexes (HMAC), erasable by crypto-shredding
- **Domains** · booking lifecycle, multi-option offers, an append-only payment ledger (Mollie/Connect, bank transfer, cash on arrival), invoices & settlements, pricing and availability logic, a CMS storefront builder, multi-language content with localized SEO, local tax and registration compliance
- **Product AI** · an agent with tool calling and an operator approval workflow, an MCP server, RAG-backed in-app help and AI-assisted guest communication
- **Method** · covered by integration tests running against a real PostgreSQL instance in CI and type-safe contracts across the stack; architecture, code generation, reviews and iterative planning AI-assisted via the orchestration of autonomous coding agents

TypeScript Bun Hono Nuxt 4 Vue 3 Astro Tailwind CSS 4 PostgreSQL (RLS) Drizzle ORM Zod
Zitadel (OIDC) Mollie / Mollie Connect PgBoss AWS S3 Docker Kubernetes Vitest Nx pnpm Vercel AI SDK
MCP AI Agents Agentic Coding

Open Source – Reusable Platform Building Blocks

Author & Maintainer · Octabits · since 2024 · [github.com/octabits-io](#)

Building blocks extracted from platform development, published as standalone packages, versioned and maintained

- **@octabits-io/framework** · server framework toolkit: Result types, IoC container, logger, RBAC (MIT)
- **octaflow** · durable DAG workflow engine with Zod-typed steps over PostgreSQL and pg-boss (MIT)
- **@octabits-io/nuxt-ui-kit** · frontend kit for Nuxt/Vue admin SPAs with an OIDC session harness (MIT)
- **cert-manager-webhook-porkbun** · ACME DNS-01 solver for cert-manager written in Go – maintained fork with Helm chart, CI and docs site (Apache-2.0)

TypeScript Go Zod PostgreSQL pg-boss Nuxt Vue OIDC Kubernetes Helm cert-manager npm
GitHub Actions

MUSES – School IT Platform for School Authorities (DigitalPakt)

Software Architect & Team Coordinator · LMZ BW · 07/2024 – 06/2026

Cross-state DigitalPakt project for Baden-Württemberg, North Rhine-Westphalia and Saxony: a single interface through which school authorities and school IT staff manage WiFi access, support tickets, devices and content filtering – rolled out across all three states

- **Backend** · .NET 9 following Clean Architecture (minimal APIs, MediatR/CQRS), consolidating the five external SaaS services behind those functions into one unified REST API
- **Frontend** · a React 19 SPA with OIDC authentication and role-based access control, plus further applications across the project built with React and Next.js; an accessible component library built on React Aria, documented in Storybook and shipped as an npm package
- **Delivery guarantee** · a dedicated service in Rust that persists ticket requests from the backend and from monitoring alerts before the call and retries them with backoff, so nothing is lost while the ticketing system is unavailable
- **Operations** · GitOps on Kubernetes at a German host with Terraform, FluxCD, Helm and SOPS-encrypted secrets; CI/CD via Azure Pipelines

C# .NET 9 Clean Architecture MediatR (CQRS) TypeScript React 19 Next.js Vite Tailwind CSS 4
React Aria Storybook Rust (axum/tokio) OIDC REST MySQL Redis Docker Kubernetes FluxCD
Terraform SOPS Azure Pipelines

Smartflow AI

Architect / Backend Developer · Hoovi GmbH · 01/2023 – 06/2024

Architecture & development of the backend for an AI-powered workflow automation platform

Kotlin TypeScript Python TensorFlow OAuth 2.0 React RabbitMQ KTOR HTML CSS Docker
PostgreSQL Redis

Platform for Digital Charity Raffles

[Lead Architect / Developer](#) · Hoovi GmbH · 11/2022 – 06/2024

Client project: a multi-tenant platform that lets non-profit associations run small-scale charity lotteries digitally – from the regulatory filing through ticket sales and the draw to the final settlement. Architecture and development within the team as lead committer

- **Backend** · .NET 8 following Clean Architecture with minimal APIs and MediatR/CQRS, split into feature modules for campaigns, tickets, orders, tenants and the draw
- **Gambling law** · process steps, deadlines and the competent authorities – regulatory office, tax office, settlement body – are held as parameters per federal state (NUTS-1) and district, and drive a campaign's lifecycle
- **Geodata** · the official administrative boundaries (VG5000) imported into PostGIS via GeoPandas, region and radius search implemented with NetTopologySuite, so tickets are only sold within the permitted district
- **Auditability** · the draw derives its seed cryptographically and persists it alongside the result, so every draw can be reproduced and audited afterwards, complemented by an audit mode for campaigns
- **Payment & documents** · SEPA direct debit with mandate reference and IBAN validation, identity verification through an external ident provider, generated PDF documents (game and prize plan, terms of participation, invoices) from Razor templates, transactional mail via an outbox pattern with Quartz jobs
- **Frontend & operations** · a SvelteKit application with QR code generation and scanning for tickets; operated in containers on Kubernetes behind Traefik, shipped through GitHub Actions

C# · .NET 8 · Clean Architecture · Minimal APIs · MediatR (CQRS) · EF Core · Dapper · PostgreSQL/PostGIS · NetTopologySuite · NodaTime · Svelte/SvelteKit · TypeScript · Tailwind CSS · OIDC · SEPA direct debit · Quartz · iText7 · RazorLight · Python/GeoPandas · Docker · Kubernetes · GitHub Actions · OpenTelemetry · Serilog · xUnit

Blockchain/web3 NFT Store/Platform

[Architect / Full Stack Developer](#) · Hoovi GmbH · 12/2021 – 09/2022

Architecture & development of an NFT trading platform including frontend, backend and smart contracts on Polygon/Matic

Kotlin · TypeScript · OAuth 2.0 · React · Matic · Solidity · KTOR · Shopify · HTML · CSS · Docker · MongoDB · Redis

Allsky – Drone Detection over Critical Infrastructure

[Architect / Full Stack Developer](#) · Hoovi GmbH · 05/2021 – 12/2021

Architecture & development of a platform for monitoring the airspace above critical infrastructure: fixed all-sky cameras, ML-based image analysis to detect and classify flying objects – drones in particular – plus trajectory tracking and alerting on suspicious approaches

TypeScript · Vue.js · Kotlin · KTOR · Python · HTML · CSS · TensorFlow · opencv · MQTT · Docker · PostgreSQL · Redis · Flutter/Dart

Education Management System for the Public Sector

[Consultant](#) · n-fuse GmbH · 05/2019 – 05/2021

Code/architecture reviews, recommendations, developer support

TypeScript · Node.js · Vue.js · GraphQL · HTML · CSS · Docker · Elasticsearch · PostgreSQL · Redis · koa · sequelize

Monitoring Web Application for 3D Printers

[Architect / Developer](#) · n-fuse GmbH · 08/2017 – 01/2019

Architecture & development of frontend and backend, development of libraries and tool stack, developer support

TypeScript · Node.js · REST · Angular · GraphQL · HTML · CSS · VCL · ng-vcl · webpack · ngrx · Docker · Elasticsearch · PostgreSQL · plotly.js · Redis · koa · sequelize

Restore Commerce & Various Web Applications / Tools

[Developer](#) · n-fuse GmbH · 01/2013 – 06/2016

Development of single-page applications with EmberJS, development of libraries and tool stack

JavaScript · REST · Ember · Linked Data · Node.js

Early Projects: ERP, Business Web Applications, Support System

[Developer](#) · CiS GmbH and others · 09/2001 – 12/2012

ERP system at CiS GmbH including database architecture, device interfaces and report generation, various business web applications, an RFID-based time tracking system and a web-based live customer support system on JavaEE/XMPP – each from requirements through to maintenance

C# · VB.net · C++ · PHP · JavaScript · jQuery · ASP.net · JavaEE · JSF · XMPP · MS SQL Server · MySQL · RFID · Crystal Reports