

Andreas Sander, Senior Frontend Developer (expanding into Fullstack)

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Professional Summary

Senior Frontend Developer with 14+ years of experience building scalable, accessible web applications, the last ten of them on Dimensions.ai, an AI-powered research intelligence platform used by researchers and institutions worldwide. Deep in the React and TypeScript ecosystem, with a strong focus on performance, design systems and data visualization. In the past year, has been expanding into fullstack engineering, now working across the Python backend and driving a Pyramid-to-FastAPI migration. Early adopter of AI-assisted engineering: uses Claude Code daily, builds custom skills and plugins for it, and ships LLM features in his own open-source products. Writing and speaking publicly about frontend work since 2016.

Employment History

since 01/2016

📌 Senior Frontend Developer, Digital Science GmbH (expanding into Fullstack since 2025)

Ten years on Dimensions.ai, a research intelligence platform used by researchers and institutions worldwide. As part of a frontend team that has since spread across multiple squads, helped shape the React-based frontend and, in the last year, expanded into fullstack engineering on the Python backend – currently migrating services from the legacy Pyramid framework to FastAPI.

Key Responsibilities & Achievements:

- Transitioning into fullstack: owning Python backend features and driving the Pyramid-to-FastAPI migration (API design, async data access, tests)
- Built and maintained the React frontend and proprietary UI component library together with the frontend team, ensuring scalability for millions of research publications and grants data
- Implemented performance optimizations improving Core Web Vitals scores and reducing initial load times
- Collaborated with data scientists and backend teams to integrate AI-powered features, now contributing directly to the Python backend
- Adopted AI-assisted development (Claude Code, agentic workflows) for feature work, refactoring, test generation and code review, and shared the practices with the team
- Established frontend best practices, code review processes and testing standards; mentored junior developers and conducted technical interviews

Tech Stack: React, TypeScript, Redux/TanStack Query, Python, FastAPI, Pyramid, Storybook, Jest, WCAG accessibility, Claude Code

Employment History (continued)

03/2012 – 12/2015

Frontend Developer, Moltomedia GmbH & Co. KG

Developed and maintained e-commerce platforms and corporate websites for B2B and B2C clients across Europe.

Key Responsibilities & Achievements:

- Built responsive, accessible frontends for TYPO3 CMS and Magento shop systems, using progressive enhancement and cross-browser compatible solutions
- Developed custom PHP applications on the LAMP stack with a focus on frontend performance
- Collaborated directly with clients for requirements gathering and technical consulting

Tech Stack: PHP, JavaScript, jQuery, HTML5/CSS3, TYPO3, Magento, MySQL

Assistant (HiWi) jobs

01/2012 – 03/2012

Centre for e-Learning Technology (CeLTech), iOS Developer Collaborated with the development team to integrate new educational services and optimize the user experience within the mobile learning platform.

10/2011 – 12/2011

Villeroy & Boch AG, Social Media Team Managed daily social content scheduling and community engagement to support brand campaigns and report on performance.

08/2009 – 12/2011

DFKI (ActiveMath Group) Integrated new learning materials from various formats into the ActiveMath platform, including necessary metadata tagging for adaptive use and system compatibility.

Selected Open Source Projects

since 2025

Ferrico – local-first desktop bookmark manager

Native desktop app for macOS, Linux and Windows plus a read-only Android companion from the same codebase. Fuzzy search over large libraries, folders and tags, import/export (JSON, HTML, OPML, CSV), duplicate and broken-link detection, browser extension. Optional AI features (natural-language search, inbox auto-sorting, CSV mapping, duplicate resolution) powered by the local Claude CLI. GPL-3.0.

Stack: Rust, Tauri 2, SQLite, React 19, TypeScript, Vite, Tailwind CSS 4, Bun  Source

since 2019

TinyPNG for VS Code – image compression, one keystroke away

VS Code extension that compresses PNG and JPG assets without leaving the editor, using the TinyPNG engine with permission. Published on the Visual Studio Marketplace, free and open source.

Stack: TypeScript, VS Code Extension API  Source

since 2026

Claude Code Marketplace – custom skills, plugins and commands

Personal plugin marketplace for Claude Code: auto-activating skills for Rust/Tauri, Supabase, Make.com and Lua/Love2D, slash commands backed by MCP servers, and tooling to scaffold and validate new plugins.

Stack: Claude Code plugins, Markdown skills, MCP  Source

2026

Kann ich lüften? – offline-first PWA

Web app that compares absolute indoor and outdoor humidity, checks condensation risk and recommends whether and how long to ventilate. Installable, works offline, pulls outdoor values from Open-Meteo. Unit-tested decision logic, documented calculation model.

Stack: TypeScript, Lit (Web Components), Vite, Vitest, GitHub Actions  Source

Technical Skills

Languages	■ TypeScript, JavaScript (ES2024+), HTML5, CSS3, Rust (Tauri, desktop apps), Python, PHP, Go (basics)
Frameworks & Libraries	■ React 19 (advanced), React Router, TanStack Query, Redux, Vue, Lit / Web Components, Svelte, FastAPI, Pyramid
UI & Styling	■ Design systems, Radix UI, Tailwind CSS 4, Styled Components, CSS-in-JS, modern CSS (container queries, layers, nesting)
Testing	■ Jest, Vitest, React Testing Library, Unit & Integration Testing
Tooling & DevOps	■ Vite, Webpack, Bun, npm/yarn, Storybook, ESLint, Prettier, Git, GitHub Actions (CI/CD), Docker

AI-Assisted Engineering

Agentic Coding	■ Daily use of Claude Code for feature work, refactoring, test generation and code review; also GitHub Copilot and ChatGPT
Extending AI Tools	■ Author of custom Claude Code skills, plugins and slash commands; integrating MCP servers (Supabase, Make.com) into the workflow
Building with LLMs	■ Shipping LLM features in products (Claude CLI integration in Ferrico); prototyping with the Anthropic and OpenAI APIs; prompt engineering

Specialized Knowledge

Data Visualization	■ Custom dashboard components, Highcharts, ECharts, D3
Accessibility	■ WCAG compliance, semantic HTML, ARIA patterns
Web Performance	■ Core Web Vitals optimization, code splitting, lazy loading, Lighthouse
Offline & Native	■ PWAs, Service Workers, cross-platform desktop apps with Tauri

Education

2010–2012	■ Master of Science (1.5), Saarland University Thesis title: <i>Konzeption & Entwicklung eines standardisierten Datenbankmodells für mobile Konferenz-Applikationen.</i>
2009–2010	■ Bachelor of Science (2.8), Saarland University Thesis title: <i>A Wizard of Oz Experiment to study Error Detection and Correction Competencies.</i>
2004–2009	■ Teacher Training (Mathematics & Computer Science), Saarland University <i>Transferred to B.Sc./M.Sc. program in 2009</i>

Research Publications

Conference Proceedings

- 1 E. Melis, **A. Sander**, and D. Tsovaltzi, “How to support meta-cognitive skills for finding and correcting errors?” In *Cognitive and Metacognitive Educational Systems, Papers from the 2010 AAAI Fall Symposium, Arlington, Virginia, USA, November 11-13, 2010*, ser. AAAI Technical Report, vol. FS-10-01, AAAI, 2010.
🔗 URL: <https://cdn.aaai.org/ocs/2179/2179-9462-1-PB.pdf>

Languages

German: Native **English:** Fluent (professional working proficiency)

Community & Content

- since 2016  **andi1984.dev**, Personal blog, 30+ pieces on React, TypeScript, CSS, Rust and dev workflows; syndicated on Dev.to.
- since 2020  **YouTube & Twitch**, Screencasts and live coding on React internals, tooling and workflows, each with a written transcript.
- 2016–2024  **CoderDojo Saar Organizer**, Organizing with another person a monthly coderdojo.
- 2017–2021  **WebWorkerSaar Organizer**, Organizing a local developer meetup in Saarbrücken.
- 2010–2014  **SaarCamp Organizer**, Organizing a local barcamp in Saarbrücken with a small team.