



Stefan Wagner

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Summary

Senior Software Engineer with 20 years of experience shipping products across industrial robotics, AI/ML, real-time 3D graphics, and mobile gaming. Currently building AI-powered robot programming tools at Wandelbots. Led engineering teams, shipped applications to 1.7M+ users, and contributed to enterprise open-source SDKs. Deep expertise in TypeScript, React, Python, Unity, and WebGL.

Experience

Wandelbots GmbH, Senior Software Engineer

- AI Department: Building solutions enabling robots to learn from human demonstrations via agentic and imitation learning within the Nova platform
- Architected infrastructure for embedding interactive 3D robot visualization (Three.js, WebGL) into customer applications
- Core contributor to open-source wandelbots-nova TypeScript/Python SDK and React component library for 3D robot visualization
- Designed and developed industrial robot welding application with path planning and weld parameter optimization
- Built no-code visual robot programming interface making complex robotics accessible to non-programmers
- Tech: TypeScript, React, Three.js, Python, WebGL, ROS

Dresden, Germany

Feb 2021 – present

5 years 1 month

Die Kapitaene Media GmbH, Tech Lead

- Led engineering team of 6 developers; established CI/CD pipelines, code review processes, and analytics infrastructure
- SQIN (BeQu): Built face analysis using TensorFlow Lite + Unity (468 3D facial landmarks, 30+ FPS) – Google Play Best App of 2020
- Hi Frog!: Scaled live-service architecture to 1.2M+ downloads; optimized 3D engine for low-end mobile; real-time weather API integration
- Tiny Armies: Architected deterministic lockstep networking for 8-player real-time multiplayer (sub-50ms sync) – Google Play Featured
- Mowy Lawn: Early ARKit/ARCore integration; 150k+ downloads – App Store Featured
- Quiz Friends: Engineered secure real-money payment infrastructure with fraud detection and ACID-compliant transactions; 50k+ downloads
- A/B testing infrastructure, monetization system design, data-driven product decisions across all titles

Dresden, Germany

Jan 2015 – Jan 2021

6 years 1 month

Fraunhofer IGD, Research Assistant

- Built EcoSky – interactive aircraft lifecycle environmental visualization for CleanSky EU research initiative
- Hardware-accelerated rendering pipeline using WebGL and d3.js for dense, multi-dimensional environmental datasets
- Collaboration with PE International and University of Stuttgart

Dresden, Germany

Apr 2013 – July 2015

2 years 4 months

Crytek GmbH, Diploma Thesis Student

- Researched 3D model compression and streaming techniques for WebGL applications
- Achieved 50% better compression than GZIP for 3D binary models using custom encoding
- Evaluated progressive mesh streaming, Level of Detail techniques, and client-side caching (IndexedDB)

Frankfurt, Germany

Oct 2011 – Sept 2012

1 year

Freelance, Mobile Developer

- PacMap: Location-based AR game – Featured on German national TV (ZDF Heute Journal); 50k+ downloads
- Pax Britannica: Solo-ported acclaimed strategy game to Android using libGDX; 50k+ downloads
- OpenGL ES 2.0 shader experiments, raymarching visualizations, Android live wallpapers

Dresden, Germany

July 2009 – Sept 2011

2 years 3 months

Fraunhofer IIS/EAS, Student Assistant

- Software development at research institute during university studies (Java)

Dresden, Germany

Oct 2007 – Sept 2011

4 years

Education

Diplom-IT Dresden, Media Informatics (Medieninformatik)

- Focus: Computer Graphics, Distributed Systems
- Thesis: 3D Model Compression and Streaming (cooperation with Crytek GmbH)

Dresden, Germany

Oct 2007 – Sept 2012

Apprenticeship (IHK) **DGIS Service GmbH**, GIS Software Development

Dresden, Germany

Aug 2005 – July 2007

Technical Skills

Languages: TypeScript/JavaScript, Python, C#, C++, Java, GLSL/HLSL**Frontend:** React, Three.js, WebGL, Material-UI, Node.js**AI/ML:** TensorFlow Lite, PyTorch, MediaPipe, LeRobot**Game/3D:** Unity, libGDX, Blender, Photon Engine, Box2D, custom physics engines**Robotics:** industrial robot programming, path planning, Wandelbots Nova platform**Architecture:** Deterministic lockstep networking, real-time multiplayer, distributed systems, API design**DevOps:** CI/CD pipelines, A/B testing, analytics infrastructure, mobile deployment

Key Achievements

1.7M+ combined downloads across shipped mobile applications

Google Play Best App of 2020 – SQIN (PersonalGrowth category)

Google Play Featured – Tiny Armies

App Store Featured – Mowy Lawn

German National TV (ZDF) – PacMap featured on Heute Journal

882 GitHub stars across 30 open-source repositories

Languages

German: Native**English:** Professional / Fluent