

# Markus Hütter

SENIOR .NET / C# ARCHITECT · FREELANCER



## About Me

Senior Software Architect with more than 20 years of experience designing, modernizing, and stabilizing complex .NET applications.

Specialized in taking on challenging projects, resolving technical roadblocks, and developing sustainable software architectures for systems that remain maintainable over the long term.

Quickly integrates into existing teams and fosters cooperative, respectful collaboration with developers and business stakeholders.

## Technical Focus Areas

- Desktop & Mobile
- Custom Controls & UI/UX Design
- Legacy Modernization
- Industrial Computer Vision
- IoT & Home Automation
- CAD & Rapid Prototyping (Fusion, 3D Printing)

## Contact

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🏠 Spremberg, Germany

## Personal

Nationality: German

Date of birth: 10.12.1984

Available immediately

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## PROJECTS - FREELANCE

2020 - 2024

### Lead Developer - Active Monitoring System

AHT COOLING SYSTEMS

📍 REMOTE (AUSTRIA)

Ticket-management system for monitoring and maintaining cold chains for major European retail chains including LIDL and Auchan.

- Project turnaround: Resolved existing technical roadblocks with a proof of concept developed in 14 days, then became lead developer.
- Architecture: Reworked the desktop application's architecture for maximum performance with 100k+ tickets.
- Business value: Implemented a robust offline mode using SQLite for field technicians.
- Mobile: Took over mobile development and proposed a shared Xamarin/MAUI codebase.

Tech: WPF, UWP, C#, SQLite, OpenAPI/REST, Xamarin, MAUI

2013 - 2021

### Software Architect - TruLog 3D / QScan

DAQOTA SYSTEMS INC.

📍 REMOTE (USA) / ON-SITE (USA, CANADA, JAPAN)

Industrial high-speed 3D scanning, modeling, and optimization systems for the veneer industry.

- TruLog 3D: Completely rebuilt the technology stack (migration from Microsoft XNA to WPF + DirectX).
- Innovation: Developed multi-camera 3D calibration with perspective correction for 3D point clouds.
- QScan: Developed algorithms for automated defect prediction and predictive cutting, including anticipating repeated defects.
- Engineering: Introduced dependency injection, TDD, and a professional TFS branching strategy.

Tech: C#, WPF, DirectX, Caliburn Micro, PLC, TDD

2019 - 2020

### WireGuard/UWP Developer

JUMP TRADING

📍 REMOTE (USA)

Ported the WireGuard protocol (wireguard-go) to Windows 10 using the UWP Tunnel APIs.

- Cryptography: Implemented the WireGuard handshake (the Noise Protocol's IK handshake, ChaChaPoly, Blake2s) in C#.
- R&D: Investigated and used undocumented Windows APIs, including via reflection.
- Collaboration: Worked directly with Jason A. Donenfeld (creator of WireGuard).

Tech: Go, C#, UWP Tunnel API, Cryptography

2017 - 2019

### Lead Windows Developer - 2Do App

BEEHIVE INNOVATIONS

📍 REMOTE (DUBAI)

Led the Windows/UWP reimplementation of an established productivity app as the sole Windows developer, porting it from Android (Java).

- UI innovation: Conducted in-depth R&D with the UWP Composition Framework to implement complex, fluid sliding panels.
- Data: Ported the Java data model to C# and implemented its SQLite database layer.

Tech: C#, UWP, Composition Framework, SQLite

2019 - 2020

### Software Architect - Window Restorer

JUMP TRADING

📍 REMOTE (USA)

Windows utility that automatically restores window positions when a laptop is docked or undocked.

Tech: C#, WPF, Windows Automation API

2018

### WPF/UWP Developer - Bookhive

WHEELERS EPLATFORM

📍 REMOTE (SYDNEY, AUSTRALIA)

Supported the completion and refinement of a WPF/UWP app for viewing and annotating PDF e-textbooks in the Australian education market.

Tech: WPF, UWP, PDF SDK

2016

### Software Developer / Consultant

TRIAGE CONSULTING GROUP

📍 REMOTE (SAN FRANCISCO, USA)

WPF frontend consulting and UI modernization for a healthcare revenue-cycle management application.

- Audit: Created a comprehensive XAML code assessment with a refactoring roadmap for the client.
- UX: Reworked critical insurance and audit panels to improve usability.

Tech: WPF, XAML, Telerik, MVVM

## Languages

|         |                 |
|---------|-----------------|
| German  | Native language |
| English | Business fluent |
| French  | Basic knowledge |
| Spanish | Basic knowledge |

## Core Tech Stack

|            |        |
|------------|--------|
| C# / .NET  | Expert |
| WPF / XAML | Expert |
| UWP / MAUI | Expert |

## Software Architecture

|                      |             |       |
|----------------------|-------------|-------|
| Dependency Injection |             |       |
| Design Patterns      | MVVM        | Prism |
| Caliburn Micro       | TDD         | Async |
| Parallelization      | Concurrency |       |

## Additional Skills

|            |              |         |  |  |
|------------|--------------|---------|--|--|
| Python     |              |         |  |  |
| C++        |              |         |  |  |
| Go         |              |         |  |  |
| Clean Code | UI/UX Design | Scrum   |  |  |
| DirectX    | SQLite       | OpenAPI |  |  |

## Tools & Hardware

|                 |                |        |     |
|-----------------|----------------|--------|-----|
| Autodesk Fusion | Home Assistant |        |     |
| 3D Printing     | Git            | Gerrit | TFS |

## PROFESSIONAL EXPERIENCE - EMPLOYMENT

- 2012 - 2013 **Research Associate - FAnToM**  
LEIPZIG UNIVERSITY LEIPZIG  
Developed a scientific visualization system for field analysis using topological methods.  
Tech: C++
- 2007 - 2012 **Working Student / Lead Developer - DocFlow**  
KUNERT BUSINESS SOFTWARE LEIPZIG  
Developed a WPF template editor for user-friendly editing of XSL stylesheet templates and XSL transformations in a document management system for a major customer (Vita 34). Progressed from student assistant to lead software developer during my studies.  
Tech: C#, WPF, PRISM, MEF, XSL-T

## EDUCATION

- 2009 - 2012 **Master of Science in Computer Science**  
LEIPZIG UNIVERSITY LEIPZIG
- 2004 - 2009 **Bachelor of Science in Computer Science**  
LEIPZIG UNIVERSITY LEIPZIG
- 2004 **German University Entrance Qualification (Abitur)**  
GYMNASIUM ENGELSDORF LEIPZIG
- 2001 - 2002 **Year Abroad**  
BERKNER HIGH SCHOOL RICHARDSON, TEXAS, USA

## SABBATICAL & PERSONAL PROJECTS

- 2024 - 2026 **Fiat Ducato Camper Van Conversion**  
PERSONAL PROJECT LEIPZIG / SPREMBERG  
A deliberate break dedicated to independently planning and carrying out a camper van conversion. Every aspect was handled personally, from the first line in Fusion to the finished vehicle:
- Planning: Complete 3D modeling of the interior in Autodesk Fusion.
  - Craftsmanship: Bodywork and welding, as well as all carpentry and joinery.
  - Installation: Complete electrical, solar, water, and heating systems.
  - Software: Smart control via Home Assistant (Pi 5), including custom Python plugins for hardware integration (diesel heater, I2C chips).
  - Hardware: User interface via Nextion touchscreen.
  - Security system: Monitoring with ESP32-CAMs and Zigbee sensors.
- 2019 - 2023 **Co-founding and Running a Dance School (Salsa & Bachata)**  
LAVIDABAILA.DE LEIPZIG  
Started by offering dance classes at Leipzig University and went on to found our own civil-law partnership (GbR).
- Development: Together with my dance partner, built our own dance school, including developing the course concept, organizational management, and marketing.
  - Growth: Built a community of up to 15 couples per class and organized multi-day weekend events with guest instructors.
  - Tech: Independently developed the website with Astro and Tailwind CSS.
- Ended this activity in 2023 to focus on the van project.