



TOBRESO

TOBIAS BREUER SOLUTIONS

Master of Engineering - IT Freelancer - Software Magician

I am a passionate software developer with over a decade of experience in developing, testing and maintaining large and complex software systems. Since completing my master's degree in computer science in Aachen, Germany (2012), I was working full-time as a senior developer within the [FEV Group](#) at the [FEV Software and Testing Solutions GmbH](#) in Aachen until September 2021.

Since January 2019, I am offering my expertise as an IT freelancer to my clients.

Following are some examples of services that I provide:

- Design and development of system-software based on .NET Framework / .NET Core.
- Migration / refactoring of existing software solutions (e.g., upgrade to .NET Core, migration from On-Premise to Cloud, migration from classic Web (e.g., Silverlight) to modern Web-App (e.g., Angular)).
- Creating Test-Concepts, writing and maintaining unit- and integration tests.
- Evaluation and improvement of existing DevOps processes or support in setting up new ones (From requirements to e2e).
- Design and implement cloud-native solutions based on the Microsoft Azure stack.

This list serves only as an example to give you an idea of where my strengths lie. So, in case you are looking for support - may it be in form of development or consulting - in an ongoing or upcoming software project, you came to the right place and can stop searching.

Instead, just send me an [email](#) with a non-binding request and let me know how I can assist.

Best regards, Tobias.

My Skills

The following is an overview on my main skills and my personal assessment regarding my knowledge level for each of the different areas of technology. Note, that even though I consider myself an expert in C# / .Net-Framework development, the bar will never fill up entirely as I am convinced that there will always be room for [improvement](#).

C# / .NET-Framework / .Net (Core) (+10 years)

ASP.NET (WEB APIs, HTTP(S), REST) (+8 years)

Unit-/Integration Testing (Nunit, xUnit, Moq) (+10 years)

Entity Framework 6 / Entity Framework Core (+7 years)

Frontend Development (Angular, TypeScript, CSS3) (+5 years)

Development Processes (Scrum, Kanban, CMMI, A-SPICE) (+8 years)

CI / CD (Jenkins, GitHub, SonarQube, Azure DevOps) (+8 years)

Mobile Development (Xamarin, Xamarin Forms, Android) (+2 years)

MSSQL Server / TSQL / SSIS (+4 years)

Certificates



Azure Fundamentals (AZ-900)



Azure Developer (AZ-204)



Azure DevOps Engineer (AZ-400)

Language Skills

- German: native language
- English: fluent
- French: basic knowledge

Career Path

March 2022 – ongoing – SQL Server / Data-Warehouse automation

Freelancer – Industrial Real Estate GmbH

Based on the Microsoft SQL Server Integration Services, aka SSIS, several ETL Packages have been created to read and adapt data from various sources and feed it into the internal data warehouse to be consumed by new and updated Azure Functions for external customer. ETL Packages are deployed to the SQL Server and executed automatically by the SQL Server Agent.

- Microsoft SQL Server admin.
- Azure solutions architect.
- DevOps architect and operator (Azure DevOps).

C#, .NET 6, AzureFunctions v4, EF Core, Azure DevOps, xUnit, Azure KeyVault, Azure HybridConnections, Azure Identity, Azure ActiveDirectory

Mar 2022 – Blazor Open-Source contribution

OpenSource contribution to the MudBlazor project

For the Blazor component library [MudBlazor](#) I implemented the following features for the new Data-Grid component:

- [Refactoring FilterDefinitions API.](#)
- [Implement support for sorting on multiple columns at once.](#)
- [Implement support for resizable columns.](#)

C#, .NET 6, Blazor

Feb 2022 – Azure Function Development

Freelancer – Industrial Real Estate GmbH

For a third-party client of Garbe, a new API was requested to fetch specific parts of data residing in an on-premise database server. For this use-case, I developed and deployed a new Azure-Functions-App containing multiple functions to be triggered by the client. All functions are secured using AzureActiveDirectory principals to avoid sharing of unnecessary secret information. The communication with the on-premise servers containing all required data is achieved by using Azure-Hybrid-Connections inside the functions app. I established an end-to-end CI/CD pipeline, building the source-code, running all unit- and integration-tests with test result and code-coverage analysis. After a successful build, the function app is automatically deployed into the dev slot of the target function app. Deployment to test, and productive slots is triggered manually via the DevOps release pipeline by the project owner.

- Software architecture design.
- Software development and testing.
- Azure solutions architect.
- DevOps architect and operator (Azure DevOps).

C#, .NET 6, AzureFunctions v4, EF Core, Azure DevOps, xUnit, Azure KeyVault, Azure HybridConnections, Azure Identity, Azure ActiveDirectory

Oct 2021 – June 2022 – DevOps- and Software-Engineering

Freelancer / Technical specialist – Serrala Group GmbH

At Serrala I'm supporting existing development teams in various aspects of the software engineering landscape. After starting with enhancing existing DevOps pipelines with additional steps for static code and vulnerability analysis, I have been added to additional teams for support in daily developer business. Topics reach from refactoring large areas of legacy code to assistance in ongoing feature implementation and team member support and guidance.

- Migration of legacy tests from MS-Test to xUnit and Moq.
- Migration of existing legacy TFS repos to GitLab and Git LFS (rewriting history).
- Enhance DevOps pipeline with static code and vulnerability analysis.
- Software architecture design.
- Software development and testing.
- Database and API design.
- DevOps architect.

C#, .NET Framework, .Net 5, MS-SQL, Angular, TypeScript, JavaScript, CSS, ASP.Net Core, EntityFramework (EF6 + Core), GitLab, SonarQube, xUnit, MS-Test

Nov 2017 – Aug 2021 – Project 'Daedalus'

Technical project lead – Volkswagen AG

Within the FEV STS GmbH, I was responsible for the design and implementation of a web application (frontend and backend) used by several companies and suppliers within VW (CARIAD, Audi, Porsche, IAV).

The application is used for semi-automatic calibration of ECU software in the area of functional safety.

- Software architecture design.
- Requirements management.
- Lead developer for a team of 3 – 5 developers.
- Software development and testing.
- Database and API design.
- DevOps architect and operator (Azure DevOps).

C#, .NetFramework, MySQL, MS-SQL, Angular, TypeScript, JavaScript, CSS, ASP.Net, EntityFramework (EF6 + Core), Automotive-SPICE

Jul 2020 – Azure DevOps transition

Transition to Azure – FEV STS GmbH

Performed the transition of the existing CI DevOps pipeline from an on-premise environment into the azure cloud dev-test environment.

- Jenkins to DevOps transition (Azure Pipelines with self-hosted and cloud-based build agents).
- Repository transition, including history and artifacts (SVN to git and GitHub Enterprise to Azure git).
- Setup and maintenance of Azure VMs for demo environment and shared server for SonarQube).
- Administration of Azure Organization and Subscription.

Azure, Git, DevOps, Azure-VMs, Subscriptions, Resourcegroups, Networking

2019 - Android prototype development

In-Car and mobile app for e-Mobility – Share 2 Drive GmbH

For the [Geneva International Motor Show - 2019](#) the customer requested a prototype software, based on Android, which should run primarily on an in-car Android box connected to a touchscreen mounted to the centre of the dashboard. The app served as a demonstrator for a possible future version of the in-car software. Using a Bluetooth connection to a [FlexCard-Air](#) that was connected to the cars CAN bus, the app included functionality to control the driver's seat position, the steering wheel and the interior and exterior lights.

Additionally, an Android-based smartphone prototype application has been developed that demonstrated possible end-user software experience on their personal smartphones. When getting in range of the cars Bluetooth connection, the app was enabled to unlock the car, open the (automated) slide door and activate the headlight flasher.

C#, .NET Framework, Xamarin-Forms, Android, Bluetooth, CAN, VisualStudio, Git, XUnit

Feb 2015 – Mar 2016 – Project 'FEVCal'

Technical project lead – FEV Europe GmbH

Development of next-gen simulation and optimization software for exhaust-after-treatment systems (FEVCal).

- Software architecture design.
- Requirements management.
- Lead developer for a team of 2 – 3 developers.
- Software development and testing.
- CMMI

C#, .NetFramework, Simulink, MATLAB, NUnit, A2L, Hex/S19, DCM, MDF 3/4

Nov 2013 – Feb 2015 – Project 'ProCal-EAS'

Technical project lead – FEV Europe GmbH

Development of simulation software for exhaust-after-treatment systems (ProCal-EAS).

- Software architecture design.
- Lead developer for a team of 2 – 3 developers.
- Software development and testing.

C#, .NetFramework, Simulink, MATLAB, NUnit, A2L, Hex/S19, DCM, MDF 3/4

Aug 2012 – Nov 2013 – Project 'FACE'

Project Engineer – FEV GmbH

Development of domain specific evaluation framework 'FACE' for application engineers within the automotive environment.

C#, .NetFramework, NUnit, A2L, Hex/S19, DCM, MDF 3/4

Academic education

Mar 2011 – Aug 2012 – Master Study

Master of Engineering – Computer Science

Completed degree in computer science at the University of applied sciences in Aachen.
Final grade: 1.3

Masterthesis: "Konzeption und Implementierung eines Software-Moduls zur Definition und Ausführung benutzerdefinierbarer Scripts in einem Evaluierungs-Framework".

Created a fully functional module allowing end-users to write custom scripts in a domain specific language, based on C#. End-Users within the automotive industry got enabled to access and operate on standard ECU specific data like measurements and characteristics in a most flexible way. The module provides best-practice tool support like interactive code completion and debugging, and fully integrates into the already existing framework.

C#, .NetFramework, Microsoft.CodeAnalysis (aka: Project "Roslyn"), Mdbg, P-Invoke, A2L, Hex/S19, DCM, MDF 3/4

Oct 2010 – Mar 2011 – Practical Semester

Practical Semester – Forschungszentrum Jülich

Follow up work, based on my bachelor thesis at the [Institute of Neuroscience and Medicine \(INM\) \(fz-juelich.de\)](https://www.fz-juelich.de). Development of a multi-GPU based RayTracing algorithm for visualization of voxel-based data of medical scans of the human brain.

C++, Cuda, Volume Rendering, Ray-Casting

Jul 2007 – Mar 2011 – Bachelor Study

Bachelor of Science – Computer Science

Completed degree in computer science at the University of applied sciences in Aachen.
Final grade: 1.8

Bachelorthesis: "Performanceanalyse paralleler CPU- und GPU-basierter Implementierungen zur Volumenvisualisierung".

Part of the research project 'GPUFaserVis', was the implementation of algorithms that can be used for the visual representation of medical volume data which derived from different sources, like computer tomography (CT) or a magnetic resonance tomography (MRT).

The aim of the visualization is to give the user the possibility to view this data within a user interface in interactive speed. The user is thus given the possibility to use the medical data for diagnostic examinations.

C++, Cuda, Volume Rendering, Ray-Casting

Aug 2003 – June 2005 - Apprenticeship

IT Specialist for Application Development

Went through the apprenticeship as an IT specialist for application development at the [Datus AG](#) in Aachen – Germany. The focus was the development of customized communication software based on C++ as well as configuration and testing of network hardware. Furthermore, I was able to get deep insights and knowledge of wide used network and routing protocols.

During the apprenticeship, I was elected to be the leading youth trainee representative.

Software development with C++, Network protocols (TCP/IP, UDP, FrameRelay, X25, ATM, ISDN, IPSec, BGP etc.)

June 2002 – Vocational Diploma

Vocational Diploma – BLS Eschweiler

Finished my school education at the secondary school "[Bischöfliche Liebfrauenschule](#)" in Eschweiler – Germany.

Intensified courses: Math and English

Graduation: General technical college entrance qualification

Personal Info

- Birthday: 31.05.1984
- Nationality: german
- Marital status: unmarried – living together with my girlfriend and her daughter since 2005
- Strengths: openness, honesty, initiative, independence, quick comprehension, diligence