



Curriculum Vitae

■ Personal Information

Surname: Auer
First names: Florian Johannes
Date of birth: 21.02.1992
Place of residence: Blasius-Hogger-Weg 4
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■ Education

- 09/2015 - 11/2017 **Master programme Information Technology & Systems Management**
- Graduation: Diplomingenieur (DI)
 - Focus: Adaptive Software systems, E-Health
 - Master thesis: „Augmented Reality: Frameworks and Workflow for Android and iOS“
- 09/2011 - 07/2015 **Bachelor's programme Information Technology & Systems Management**
- Graduation: Bachelor of Science in Engineering (BSc.)
 - Focus: Media Informatics
 - Bachelor thesis 2: „Porting a Windows-Mobile-Application to Android“
 - Bachelor thesis 1: „Continuous Integration for iOS“
- 09/2002 - 05/2011 **Karls gymnasium Bad Reichenhall**
- Graduation: General High School Diploma (Abitur)
 - Advanced Courses: Physics und Geography

■ Advanced Training & Certificates

Xamarin.Camp Xamarin.iOS, Xamarin.Android and Xamarin.Forms
Xamarin Xamarin Certified Mobile Professional
 Xamarin Certified Mobile Developer



■ Professional Career

09/2018 - Now

Independent Software Architect & Software Developer

- Focus: .NET MAUI, Xamarin.Android, Xamarin.iOS, Xamarin.Forms, Unity3D, WPF, UWP and ASP.NET

04/2018 - 09/2018

Head of Mobile Development

- Focus: Team Leadership, Product Management, Xamarin.Android, Xamarin.iOS, Hololens (UWP), Windows CE / Mobile
- Employer: Wanko Informationslogistik GmbH
- Domain: Logistics, Warehouse, Telematics

06/2017 - 04/2018

Software-Architect

- Focus: Xamarin.Android, Xamarin.iOS, Hololens (UWP)
- Employer: Wanko Informationslogistik GmbH
- Domain: Logistics, Warehouse, Telematics

06/2015 - 05/2017

Software-Developer

- Focus: Xamarin.Android, Xamarin.iOS, Windows CE / Mobile
- Employer: Wanko Informationslogistik GmbH
- Domain: Logistics, Warehouse, Telematics

02/2015 - 04/2015

Internship & Bachelor thesis

- Focus: Xamarin.Android und Windows CE / Mobile
- Employer: Wanko Informationslogistik GmbH
- Domain: Logistics, Warehouse, Telematics

06/2014 - 11/2014

Software-Developer

- Focus: C# & .NET, Touchoptimisation Windows.Forms
- Employer: ASCO GmbH
- Domain: Metal-Industry

■ Skills (selection)

German	Native language
English	C2 Technical & Business
.NET MAUI / Xamarin	11 years of experience & advanced training & certification (Xamarin Mobile Developer / Professional)
C# & .Net	11 years of experience
Other languages	C, C++, Java, Swift, R, Angular
Development	iOS, Android, Windows Phone, UWP, WPF, Microsoft Hololens, Unity3D
Machine Learning	Microsoft Azure ML, Matlab, Neuronal Networks, SVM
Open Source	Contributor to Xamarin.Forms, MVVMCross, Unity OAuth

■ Projects (selection)

MSR - Mobile Service Recording

Flughafen München GmbH

Mobile Service Recording enables ground personal management. The coordinated tasks are for example about luggage delivery and tracking, customer handling, flight information etc.

As the lead architect and front-end developer of a cross-platform mobile application for ground personnel management at Munich Airport, I used best practices and design patterns to create a user-friendly and robust solution.

Technologies: .NET MAUI with Windows 10/11 and Android

Duration: 6+ months

HIM – Hamburger Informationsmanagement

Microsoft & Hamburger Senat

I was responsible for creating user-friendly and responsive interfaces for a system that automates administrative tasks and documents in Hamburg's public sector. HIM Workflow is a part of the Hamburger Information-Management (HIM) project, which aims to provide a comprehensive electronic document management system for the entire Hamburg administration by 2012. I used the .NET MAUI framework to develop cross-platform applications that run on Windows and iOS/iPadOS devices and worked closely with a team of developers and designers from Microsoft to ensure a high-quality and consistent user experience.

Some of the features of HIM Workflow include a virtual circulation folder for the electronic decision-making process, where documents can be uploaded, reviewed, approved or rejected by different authorities; a cross-system electronic search across central data sources, such as ELDORADO, a long-term data storage system; a flexible design of the electronic decision-making process, where users can change the order, duration and participants of each step according to their needs; and a user-friendly interface that displays the metadata, status and history of each document and workflow.

Technologies: .NET MAUI with Windows 10/11 and iOS/iPadOS

Duration: 7 months

HASCI - Handheld Application for Scanner Integration

Deutsche Post DHL Group

As a frontend developer for the HASCI project, my role was to create a mobile app that integrates with the scanners used by the postmen in Germany on the last mile. The app helps the postmen to load, deliver, and track the parcels and letters. It runs on Android devices and supports online and offline mode. HASCI is a very long running, critical project that scales the high availability of services for over 100,000 users.

Using Xamarin.Forms, Xamarin.Android and React/Typescript, I developed the user interface and the local data management of the app. The collaboration happened in big teams with developers, testers, designers and the specialist departments.

Technologies: Xamarin.Forms, Windows.Forms, Xamarin.Android and React/Typescript

Duration: 12+ months

Mobile Media App – Sales presentation tool

As a developer for the Mobile Media App project, a collaboration between Wilo SE and Adesso Mobile Solutions GmbH, my role was to create the frontend of a sales presentation tool that runs on Windows 10/11 devices. The app allows Wilo's sales representatives to showcase their products and services to potential customers at fairs and events. It features an interactive product catalog, a media library, and a feedback system. It also supports offline mode.

Using Universal Windows Platform (UWP) technologies, I developed the user interface of the app. C#, XAML, and MVVM pattern were used to create the layout and the interaction of the app. I collaborated with other developers and testers using Git, Azure DevOps, and Visual Studio.

Technologies: UWP

Duration: 12+ months

Team App

Wilo SE & Adesso SE

Wilo SE is a multinational technology company that develops sustainable solutions for the global challenges of our time, such as urbanisation, water scarcity, climate change and energy scarcity. Wilo

is a premium provider of pumps and pump systems for building services, water management and industry. Wilo has its headquarters in Dortmund, Germany and operates in more than 60 countries worldwide.

One of the key factors of Wilo's success is its digital transformation. Wilo leverages digital technologies to create innovative products and services, optimize processes and enhance customer experience. As part of its digital strategy, Wilo has developed an internal communication app for its employees, especially for its sales team. The app aims to facilitate communication and collaboration among Wilo's staff, as well as provide access to relevant information and resources.

The team app is user-friendly, secure and reliable. The app is compatible with iOS and Android devices and can be downloaded from Wilo's intranet. The app requires users to log in with their Wilo credentials and uses encryption and authentication to protect their data and privacy. The app also works offline and syncs data when online.

It helps Wilo's employees communicate and collaborate more effectively, as well as access information and resources more conveniently. The app is especially useful for Wilo's sales team who need to stay in touch with their colleagues and customers, present Wilo's products and solutions, and access Wilo's catalogues and brochures. The app also helps Wilo's sales team improve their productivity, performance and satisfaction.

My role in the team was the development of the Xamarin.Forms parts for iOS and Android.

Duration: 2 months

Movie Portal – Custom video administration portal with ASP.NET Core

araucon GmbH

I developed this portal to manage custom databases with video content in the browser. Designed to collaborate on movies with genres, artists and so on including anonymous and administrative usage with IdentityServer4. Crafted to be hosted within Microsoft Azure or any other cloud platform which supports ASP.NET Core. To store the data, both SQL Server and Azure Storage are used, easily utilized with Entity Framework Core. The frontend is made with Blazor and supports running both on the client (WebAssembly) and on the server. To exchange the data between client and server in a loosely coupled way, both REST (human readability) and gRPC (performance) are used.

Duration: 3 months

SecureSafe – Highly secure online storage with password manager by

DSwiss AG

SecureSafe is an award-winning online storage solution for companies and individuals alike. The cloud safe simplifies online file sharing and protects documents and passwords, offering a level of security comparable to a Swiss bank. SecureSafe is a unique solution thanks to the use of double encryption, triple data redundancy for each and every file and zero knowledge architecture, thus offering the highest level of privacy protection.

My role in the team was the development of the Android and iOS clients, both based on Xamarin.Forms and either Xamarin.Android or Xamarin.iOS.

For more details see <https://www.securesafe.com>

Duration: 3 months

AR FieldAdvisor - AR Remote Collaboration App

Deutsche Telekom AG & T-Systems Multimedia Solutions GmbH

The AR FieldAdvisor enables easy and effective collaboration between field technicians and experts. The video of the field technician is transmitted to the expert. By connecting the expert to the view of the field technician on site, questions and problems can be solved quickly and easily - without incurring travel expenses for additional field service assignments.

The field technician is supported by holographic annotations, such as persistent arrows and image annotations, which are displayed in the field of view. Even if the camera is moved, the annotations do not change position. Furthermore, it is possible to instantly share images like instructions with the field technician to facilitate resolving known issues. This visual support enables precise instructions from a distance and contributes significantly to fast problem solving. If required, the conversation between the expert and the field technician can be recorded, including the annotations. The recordings can be used for training or documentation purposes.

My role in the team was the development of the Xamarin.Forms, the Unity3D and the WPF app with tasks in the ASP.NET backend.

For more details see <https://cloud.telekom.de/de/software/ar-fieldadvisor>

Duration: 15 months

WebRTC for Unity3D - Video & Audio Conference on Unity3D using WebRTC and LiveSwitch

Florian Auer

Video & Audio Conference for Unity3D using WebRTC by LiveSwitch / IceLink for every platform FrozenMountain supports. Including multi-party conferencing (SFU & MCU).

To support video & audio conferencing on the three target platforms, LiveSwitch from FrozenMountain was chosen. It's built on top of IceLink (WebRTC for all Browsers and Native Platforms by FrozenMountain) and WebSync (Signaling, Chat & Data Synchronization by FrozenMountain) with the ability for multi-party conferencing (SFU & MCU).

FrozenMountain enables us to use state of the art codecs like VP8 and VP9. The project was designed to run on Unity (Android and iOS), as well as WPF. There are other platforms, which could easily be targeted. E.g. macOS, tvOS, Linux, UWP (Hololens!), iOS and Android both native and Xamarin, all browsers.

For more details see <https://auerflorian.com/html/projects/LiveSwitchForUnity.html>

Duration: 5 months

Shift Alarm - Alarm Cross-Platform Xamarin Application for Shift Workers

Florian Auer

As a shift worker, you deal with harder circumstances getting up easy and in time. This application is tailored exactly for these problems. If you work in a shift model with changing shifts, the most important thing is to wake up every day on the right time. The user can put in his own shift rhythm (e.g. can change every 3 instead of 7 days) and he is getting awake at exactly the right time on the right day. Productive Xamarin.Forms Application for iOS and Android, can be downloaded in the AppStore.

For more details see <https://auerflorian.com/html/projects/ShiftAlarm.html>

Duration: 7 months

Augmented Reality - Frameworks and Workflows for Android and iOS

Agentur LOOP New Media GmbH

Developers of AR-Solutions are facing problems. There are many scopes, frameworks and platforms. This paper solves these problems for Android and iOS. The results help to start AR-projects and reduce costs. They contain the key features of the most significant SDKs, the best workflow for writing once, running anywhere and they identify sticking points.

For more details see <https://auerflorian.com/html/projects/AugmentedReality-Frameworks.html>

Duration: 6 months

Pick By HoloVision - Study for Warehouselogistics with Microsoft HoloLens (UWP)

Wanko Informationslogistik GmbH

Fast and precise order picking is one of the most important tasks in warehouse logistics. To increase the performance here, the employees are supported by a variety of assistance systems. A cutting edge picking optimization method is pick-by-vision with data glasses. We built a fully functional client application with SLAM, barcode scanning, 3D-Object positioning, gesture interaction and REST-Communication. We could determine the major pros and cons for the use of Microsoft's HoloLens (UWP) in the field of Pick By Vision.

For more details see <https://auerflorian.com/html/projects/PickByVision-HoloLens.html>

Duration: 5 months

Intelligent Master Data Converter based on Machine Learning

SPAR Business Services GmbH

Development of a master data converter based on AI. The application receives data in more than 1.000 formats and uses different approaches to match the data with existing database columns. 10 different text analysis and machine learning tools were investigated. In the end, the classification happened with Azure Machine Learning and R. The best results delivered the support vector machine (SVM) with 73,3% right matches.

Duration: 3 months

Porting of a Windows-Mobile-Application (for Logistics Handheld Scanners) to Android

Wanko Informationslogistik GmbH

Due to the permanent advancement of mobile operating systems, software migration to up-to-date platforms is essential amongst other aspects to maintain competitiveness for companies. Therefore, this bachelor thesis deals with porting an existing Windows CE- and Windows Mobile-application to Android. It describes basic migration problems; it evaluates approaches and it describes the implementation. On the one hand, some of the related problems are the software structure in connection with reusability and maintainability of source code. On the other hand, there are operating system-specific requirements like the separation of foreground- and background threads. The evidence of the successful migration is the result, a working Android application, including server and database access. Thus, it is possible to migrate Windows CE- and Windows Mobile-software to Android by using Xamarin and C# utilizing different rugged devices of Zebra and Honeywell. The product family was (and probably is) used by big players like Österreichische Post AG, Traveco Transporte AG (fenaco) and BASF SE.

For more details see <https://www.wanko.de/telematik.htm>

Duration: 3.5 years

Continuous Integration for iOS with Jenkins CI, Travis CI and Xcode Server

Agentur LOOP New Media GmbH

Due to the rising complexity and scale of software projects, we searched for a solution to support developers in their process of creating software in teams. A system called Continuous Integration helps solving this problem. It runs builds and tests independently during the development process to warn the team, as soon as there are any issues with the integration. Often a growing team means growing organizational effort, to keep this outlay at a minimum we need to find a Continuous Integration system that fits our needs. Due to the high amount of Continuous Integration systems provided from various organisations, it is hard to find the right one. The most common systems that support iOS development are Jenkins CI, Travis CI and Xcode Server which are going to be introduced, evaluated and compared in this paper. Besides the theoretical comparison between those three systems, the paper also provides information about the practical installation and usage of them. Due to its scope of functions and usability, Xcode Server confirmed to be the best solution in terms of iOS development.

Duration: 4 months