



# Mario Adam

SENIOR SOFTWARE ARCHITECT

## Profile

Fullstack developer by passion since more than 20 years. Specialized on architecture and development of complex cloud- and webservice with long-term experience in both frontend and backend development.

## Education

### Graduate in Information Technology, Business Informatics, VWA Verwaltungs- und Wirtschaftsakademien, Frankfurt am Main

JANUARY 2003 — JULY 2006

Final grade: 2,3

### Training as specialized computer scientist in application development, Schaeffler Automotive Aftermarket oHG, Langen

SEPTEMBER 2000 — JANUARY 2002

Final grade: 2

## Professional experience

### Owner, i-identify Software Development

SINCE MARCH 2016

- Software development

### Head of software development, novaCapta Software & Consulting GmbH

JANUARY 2015 — FEBRUARY 2016

- Development of web applications
- Development and maintenance of a CMS
- Development of SharePoint applications
- Team lead: Software Development
- Conception / Development of the internal development process
- Lead developer for all software projects

### Software developer, novaCapta Software & Consulting GmbH

SEPTEMBER 2014 — DECEMBER 2014

- Development of web applications
- Development and maintenance of a CMS
- Development of SharePoint applications

### Software developer, NOWSHARE Software & Consulting GmbH

APRIL 2011 — AUGUST 2014

- Development of web applications
- Development and maintenance of a CMS
- Development of SharePoint applications

## Personal details

Am Bahndamm 28  
86865 Markt Wald  
Germany

+49 (0)172 6872530  
[mario.adam@i-identify.de](mailto:mario.adam@i-identify.de)

DATE OF BIRTH  
25.04.1980

## Links

<https://www.i-identify.de>  
<https://www.linkedin.com/in/mario-adam>

## Languages

German

English

French

## Skills

C#

Domain Driven Design

Microservices

SQL

Microsoft Azure

## Software developer, :meacon

JANUARY 2009 — APRIL 2011

- Development of web applications
- Development and maintenance of a CMS

## IT Application Operations, Schaeffler Automotive Aftermarket GmbH & Co. KG

JANUARY 2002 — JANUARY 2009

- Software development
- SAP application operation

## Support, Developer (Freelancer), InnoGames GmbH

JANUARY 2007 — DECEMBER 2008

- Game support
- Developer

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# Project experience

## Development of a prototype mobile app for parcel delivery

APRIL 2023 — JULY 2023

**Type:** Freelancer

**Function:** Development

**Customer:** Swiss service provider for parcel delivery

*Development of a prototype Android app for Zebra Technologies mobile barcode scanners to support delivery staff in parcel delivery*

In preparation for a future integration of live navigation during the delivery of packages, the extent to which the "Mapviewer" platform selected for this purpose can be integrated into the existing Xamarin app was investigated. Since significant problems emerged during this analysis, a native prototype is consequently being developed for Android.

The prototype is based on the common concepts of "Modern Android Development (MAD)" using Kotlin, Gradle (Kotlin script), MVI and Jetpack Compose. The prototype includes a full connection to the Datawedge Intent API of the Zebra Technologies scanner platform as well as the map and navigation component "Mapviewer" for the display of delivery destinations and live navigation to the next planned delivery destination. A particular challenge here was the connection of the Activity- and Fragment-based Mapviewer components with the more modern Jetpack-Compose framework.

The prototype is designed according to the concept of Onion Architecture and uses a reactive design based on the MVI approach. Likewise, a largely declarative approach with code generation based on KSP during the build process is chosen in order to reduce boilerplate code.

Furthermore, the prototype contains unit tests and instrumentation tests for all included components as well as previews for Jetpack-Compose based UI components.

The prototype is the basis for a future redevelopment of the existing Xamarin app to improve performance and integrate new features.

Technics:

- Kotlin
- Jetpack Compose
- Hilt
- KSP
- MVI
- Mapviewer
- Datawedge
- Gradle
- GIT

## Development of a mobile app for mail delivery

AUGUST 2022 — JULY 2023

**Type:** Freelancer

**Function:** Development

**Customer:** Private swiss service provider for the delivery of addressed and unaddressed mailings, catalogs and customer magazines

*Development of an app for iOS- and Android-based mobile devices to support delivery staff in mailing delivery*

To support the delivery staff and as part of the replacement of the existing hardware GPS trackers, a mobile app is being developed that is available for iOS and Android-based mobile devices. For this purpose, different frameworks were first investigated (MAUI, React Native, Flutter) with the subsequent decision in favor of the Flutter framework.

In this context, an additional WebAPI based on the ASP.Net Core framework is provided for the app, which reads the data relevant for the app from the existing database and prepares it in an optimized way.

The app supports the deliverer during the delivery by recording the current position for later quality assurance as well as reporting on the delivery carried out. In addition, the information relevant to the deliverer regarding the quantity and weight of the items to be delivered as well as other information such as access information is displayed for the individual delivery destinations (mailboxes). The information is available both as a list display and as an interactive map with a pre-drawn route.

The app uses a reactive design based on the BLoC state management concept. It contains a basic routing between the individual views. The views and the UI components contained in the views are fully covered by unit tests, as are all other logic components.

As part of a CI/CD pipeline (separate for staging and production), the app is tested in an automated way and then built separately for the target platforms and published to the respective app stores.

Technics:

- ASP.Net Core (C#)
- Entity Framework
- Microsoft SQL Server
- Flutter (Dart)
- BLoC
- Microsoft Azure
- DevOps
- GIT

## Development of data hub services

FEBRUARY 2021 — JULY 2022

**Type:** Freelancer

**Function:** Development

**Customer:** Leading company for trading and manufacturing of tools, facilities and protective gear

*Further development of existing data hub services and connection of additional data sources for central provision of company data*

In the already existing platform for providing customer data from the central SAP system, further data sources have to be integrated for a complete view of all customer data required by consuming systems in the connected system landscape. For this purpose, existing legacy systems will be replaced and migrated to the central platform, and new systems based on Dynamics CRM will be connected. The Dynamics CRM data sources are connected via Azure Service Bus integration.

An additional platform for the provision of product data from the central Informatica PIM system will be set up. The integration is made by connecting to the Elasticsearch-based audit trail of the Informatica PIM System and using the public REST API of the Informatica PIM System.

Both platforms are built upon a microservice architecture and are being published each by an additional gateway service. All endpoints within the gateway services are built as GraphQL endpoints. Each backend microservice is integrated into the gateway service via GraphQL federation.

Additionally, for each platform a minimal web frontend is provided for the documentation of the available endpoints as well as several minor tools (customer browser, product browser, admin dashboard, ...).

All microservices including the gateway services are extensively covered by unit tests and integration tests with snapshot functionality. The web frontends are covered by frontend tests (TestCafe).

Each frontend and microservice is built and deployed within the Azure DevOps Continuous Integration / Continuous Deployment pipeline as a docker image stored in the Azure Container Registry and published to a managed Kubernetes Cluster in Azure.

Technics:

- ASP.Net Core (C#)
- Microservice Architecture
- Entity Framework
- Elasticsearch
- RabbitMQ
- Redis Cache
- PostgreSQL
- GraphQL
- ReactJS
- MobX
- TypeScript
- UI-Tests (TestCafe)
- Webpack
- Microsoft Azure
- DevOps
- Docker
- Kubernetes
- GIT
- SCRUM

## Migration of Lotus-Notes Application to .NET

JUNE 2020 — DECEMBER 2020

**Type:** Freelancer

**Function:** Development

**Customer:** IT Service Provider for insurance associations

*Migration of existing Lotus-Notes application for automated processing of email and fax messages in internal application for statutory accident insurance*

Alongside with a general migration to a system environment completely based upon Microsoft Office, the existing Lotus-Notes application for classification of incoming email and fax messages and forwarding to the processing chain of the internal application for statutory accident insurance has to be evaluated and analyzed in order to elaborate concepts on how to transform the application into a .net based solution.

Additional goal is an integration of future message channels (messages from an existing web portal for cooperative members, connection to „Besonderes behördliches Postfach“ (BeBPo, messaging platform for governmental and legal exchange)) and development of a common user interface as a WPF desktop.

The import from each input channel as well as the forwarding to subsequent systems has to be processed by console applications upon a customizable schedule.

Technics:

- C# WPF
- C# Console applications
- Exchange EWS API
- Entity Framework
- EGVP / BeBPo
- Jira
- GIT

## Migration of Lotus-Notes Application to SharePoint 2019

JUNE 2018 — DECEMBER 2020

**Type:** Freelancer

**Function:** Development

**Customer:** IT Service Provider for insurance associations

*Migration of existing Lotus-Notes applications for internal usage as well as services for the insurance associations as end customer*

Alongside with a general migration to a system environment completely based upon Microsoft Office, the existing Lotus-Notes applications have to be evaluated and analyzed in order to elaborate concepts on how to transform each application into an application within the SharePoint 2019 environment.

The designed solutions will be developed and deployed as custom SharePoint 2019 team sites as well as webparts built upon the SharePoint Framework with ReactJS and standalone provider-hosted SharePoint 2019 Add-Ins.

Data migration is done with PowerShell scripts importing the Lotus-Notes data export as XML files into the target data stores.

Technics:

- ASP.Net MVC 5 (C#)
- ASP.Net Web API (C#)
- WCF (C#)
- PowerShell
- SharePoint 2019 AddIn
- SharePoint 2013 Workflows
- Self-developed CQRS framework (C#)
- Entity Framework
- OpenXML
- HTML 5
- Bootstrap 4 (SCSS)

- JavaScript (native, jQuery)
- UI-Tests (TestCafe)
- JSON / XML
- GIT

## Cloud based Headless CMS

JANUARY 2018 — JULI 2022

**Type:** Custom product development

**Function:** Application concept and architecture

*Concept and development of a cloud-based headless CMS as a public service*

The application consists of the building blocks:

- Frontend for configuration of fields, content types and the data management built upon these
- REST API for data management
- Frontend for internal reporting, payment management and application configuration
- REST API for internal management services
- Public content delivery API

While the frontend services are built as single page applications with Bootstrap 4.0 as the layout component and VueJS as rendering- and application component, the REST services are built as microservices with .Net Core and CQRS/ES using the EventFlow library. PostgreSQL has been chosen as data persistence layer.

Each frontend and REST microservice is built and deployed within the Azure DevOps Continuous Integration / Continuous Deployment pipeline as a docker image stored in the Azure Container Registry and published to a managed Kubernetes Cluster in Azure.

Technics:

- ASP.Net Core (C#)
- CQRS / Event Sourcing (EventFlow)
- Entity Framework
- SignalR
- RabbitMQ
- Redis Cache
- PostgreSQL
- HTML 5
- Bootstrap 4 (SCSS)
- VueJS (ES6)
- JavaScript (ES6)
- Webpack
- JSON / XML
- Microsoft Azure

- Docker
- Kubernetes
- GIT

## Document and data management for enterprise products

OCTOBER 2017 — DECEMBER 2017

**Type:** Freelancer

**Function:** Development

**Customer:** Leading swiss company in telecommunication

*Extension of an existing application for configuration of SharePoint Site templates and development of an extending document management solution for managing enterprise product data and documents*

The site template configuration covers configuration of basic settings for the site to be provisioned as well as the preparation of complex lists and document libraries, term management, managed search properties and content enrichment by the SharePoint Search Service.

The solution is developed as a provider-hosted SharePoint 2016 Add-In. The MVC backend being based upon the existing system additionally provides a WCF service to query matching documents in all site collections being created with the configured site template live from the partner extranet CMS with a custom XML query schema. The XML has been programmatically transformed into a valid KQL query, which then was passed to the SharePoint Search Service. The result has been returned as XML according to the service contract.

Finally, all documents and data were migrated from the previous environment – based on SharePoint 2010. A set of self-developed PowerShell scripts were used for creating approx. 500 Site Collections and migrating and post-processing their content and data via ShareGate.

Technics:

- ASP.Net MVC 5 (C#)
- ASP.Net Web API (C#)
- WCF (C#)
- TypeScript
- PowerShell
- ShareGate
- SharePoint 2016 AddIn
- SharePoint 2016 Search Service
- Self-developed CQRS framework (C#)
- HTML 5
- Bootstrap 4 (SCSS)
- JavaScript (native, jQuery)
- JSON / XML
- GIT



- SCRUM

## Document and data management for business case management

SEPTEMBER 2017 — SEPTEMBER 2017

**Type:** Freelancer

**Function:** Development

**Customer:** Leading swiss company in telecommunication

*Extension of an existing application for configuration of SharePoint Site templates and development of an extending document management solution for managing business case data*

The site template configuration covers configuration of basic settings for the site to be provisioned as well as the preparation of complex lists and document libraries, term management, managed search properties and content enrichment by the SharePoint Search Service.

The solution is developed as a provider-hosted SharePoint 2016 Add-In. The MVC backend being based upon the existing system additionally provides a REST interface for an external JIRA environment to create and modify SharePoint sites via background jobs and confirm the successful job execution back to JIRA.

Finally, all documents and data were migrated from the previous environment – based on SharePoint 2010. A set of self-developed PowerShell scripts were used for creating approx. 3.500 Site Collections and migrating and post-processing their content and data via ShareGate.

Technics:

- ASP.Net MVC 5 (C#)
- ASP.Net Web API (C#)
- WCF (C#)
- TypeScript
- PowerShell
- ShareGate
- SharePoint 2016 AddIn
- SharePoint 2016 Search Service
- Self-developed CQRS framework (C#)
- HTML 5
- Bootstrap 4 (SCSS)
- JavaScript (native, jQuery)
- JSON / XML
- GIT
- SCRUM

## Document and data management for project management

MAY 2017 — SEPTEMBER 2017

**Type:** Freelancer

**Function:** Development

**Customer:** Leading swiss company in telecommunication

*Extension of an existing application for configuration of SharePoint Site templates and development of an extending document management solution for managing project management data*

The site template configuration covers configuration of basic settings for the site to be provisioned as well as the preparation of complex lists and document libraries, term management, managed search properties and content enrichment by the SharePoint Search Service.

The solution is developed as a provider-hosted SharePoint 2016 Add-In. The MVC backend being based upon the existing system provides additional services for generating MS Office Word documents and MS Office PowerPoint presentations by using configurable data connections and chart configurations on multiple SharePoint list data.

Additionally, several background job mechanisms have been developed to execute scheduled reporting and notification tasks.

Finally, all documents and data were migrated from the previous environment – based on SharePoint 2010. A set of self-developed PowerShell scripts were used for creating approx. 250 Site Collections and migrating and post-processing their content and data via ShareGate.

#### Technics:

- ASP.Net MVC 5 (C#)
- ASP.Net Web API (C#)
- Hangfire (C#)
- WCF (C#)
- OpenXML
- TypeScript
- PowerShell
- ShareGate
- SharePoint 2016 AddIn
- SharePoint 2016 Search Service
- Self-developed CQRS framework (C#)
- HTML 5
- Bootstrap 4 (SCSS)
- JavaScript (native, jQuery)
- JSON / XML
- GIT
- SCRUM

#### Development of a PoC for a Social communication online portal

DECEMBER 2016 — SEPTEMBER 2017

**Type:** Freelancer

**Function:** Conception and application architecture, Development

*Development of a PoC for a highly available social media online portal*

First step has been the evaluation of several technics in order to find an optimal mix of technologies. After evaluation of NodeJS, ASP.Net MVC 5, ASP.Net Core as well as the usage of „Orchestra C1 CMS“ and „Orchard CMS“ a native ASP.Net Core environment has been designed around a future content integration with a headless CMS. After evaluating server-side rendering with Razor, ReactJS, AngularJS, VueJS and mithril for frontend development, a user interface based on VueJS has been conceived.

The application environment has been conceived as a distributed microservice environment in order to provide scalable API endpoints for a future mobile app.

Technics:

- ASP.Net Core (C#)
- Entity Framework Core (C#)
- SignalR (C#, JavaScript (ES6))
- Microsoft Azure
- Self-developed CQRS framework (C#)
- VueJS (ES6)
- JavaScript (ES6)
- HTML 5
- Bootstrap 4 (SCSS)
- Webpack
- GIT

## Document management for customer and contract documents

JUNE 2016 — APRIL 2017

**Type:** Freelancer

**Function:** Development

**Customer:** Leading swiss company in telecommunication

*Extension of an existing application for configuration of SharePoint Site templates and development of an extending document management solution for managing customer and contract documents*

The site template configuration covers configuration of basic settings for the site to be provisioned as well as the preparation of complex lists and document libraries, term management, managed search properties and content enrichment by the SharePoint Search Service.

The solution is developed as a provider-hosted SharePoint 2016 Add-In. While the MVC backend provides REST interfaces, WCF services for content enrichment and a plugin framework, the frontend is injected via TypeScript into the SharePoint environment and provides an abstract framework for complex webparts and controls.

Finally, all documents and data were migrated from the previous environment – based on SharePoint 2010. A set of self-developed PowerShell scripts were used for creating approx. 39.000 Site Collections and migrating and post-processing their content and data via ShareGate.

Technics:

- ASP.Net MVC 5 (C#)
- ASP.Net Web API (C#)
- WCF (C#)
- Hangfire (C#)
- TypeScript
- PowerShell
- ShareGate
- SharePoint 2016 AddIn
- SharePoint 2016 Search Service
- Self-developed CQRS framework (C#)
- HTML 5
- Bootstrap 4 (SCSS)
- JavaScript (native, jQuery)
- JSON / XML
- GIT
- SCRUM

## Service information portal for incident-, release- and change management

MARCH 2016 — MAY 2016

**Type:** Freelancer

**Function:** Development

**Customer:** Leading swiss company in telecommunication

*Development of a service information portal for notifications from incident management, release management and change management*

The collected data are aggregated from multiple channels and being offered as notification subscription. Notification occurs depending on the user settings by email and/or SMS.

The data is either

- manually entered
- imported by a windows service from an external MySQL database at a configurable frequency
- imported by a windows service from an external Oracle database at a configurable frequency
- received through a WCF interface by external systems

Technics:

- ASP.Net MVC 5 (C#)

- ASP.Net Web API (C#)
- WCF (C#)
- AngularJS 1.4 via TypeScript
- RavenDB
- Self-developed CQRS framework (C#)
- HTML 5
- Bootstrap 4 (SCSS)
- JavaScript (native, jQuery)
- JSON / XML
- GIT
- SCRUM

## Single Page Application for resource management for internal projects in SharePoint 2013

AUGUST 2015 — SEPTEMBER 2015

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Customer:** Leading DAX company in information technology

*Development of a single page application based on AngularJS and SharePoint 2013 with custom developed backend webservice for data access*

For usage in resource planning of carve-out projects a GANTT application has been developed for planning and assignment of projects, employees and workspaces.

Technics:

- Webservice using ASP.Net Web-Methods and CQRS (C#)
- Frontend via AngularJS and special self-developed JavaScript based ORM-Wrapper
- HTML 5
- LESS
- JavaScript (native)
- JSON / XML
- GIT
- Agile development

## Console application for automation of industrial plants

MARCH 2015 — MAY 2015

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Sector:** Industry / Electrical engineering

*Development of a console application for controlling industrial plants and home automation based on planned appointments in Microsoft Exchange*

Technics:

- ASP.Net (C#)
- Dependency Injection (AutoFac)
- GIT
- Agile development

## **REST API to exhibition data for mobile applications**

FEBRUARY 2015 — MARCH 2015

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Sector:** Exhibition management

*Development of a HMAC secured REST API to exhibition and exhibitor data for usage in external mobile apps*

Technics:

- PHP 6
- Zend Framework 2.2
- AOP via PHP Traits
- JSON / XML
- GIT
- Agile development

## **Single Page Application for management of key performance indicators in SharePoint 2013**

JANUARY 2015 — APRIL 2015

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Customer:** Leading DAX company in information technology

*Development of a single page application based on AngularJS and SharePoint 2013 with usage of SharePoint SOAP Webservices*

In order to provide functionality for controlling and monitoring of global and regional actions for assistance and process optimization an application has been developed for maintenance and controlling of actions and KPIs on global and regional-hierarchical level.

Technics:

- Frontend via AngularJS and special self-developed JavaScript based ORM wrapper

- HTML 5
- LESS
- JavaScript (native)
- JSON / XML
- GIT
- Agile development

## Process definition for agile software development

JANUARY 2015 — FEBRUARY 2015

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Concept

**Customer:** internal

*Conception of a formal development process based on agile methodology*

In order to optimize the internal development process a process has been designed and established, which shortened the development cycle of change requests and increased software quality by an integrated code review process.

Further the risk of development conflicts has been reduced by a process-driven reduction of development duration.

## Single Page Application for product management in SharePoint 2013

OCTOBER 2014 — FEBRUARY 2015

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Customer:** Leading DAX company in information technology

*Development of a single page application based on AngularJS and SharePoint 2013 with usage of SharePoint SOAP Webservices*

The application provides functionality to a large group of users to collect and manage product data in a long-term iterative process. Within this process data is converted to uniform data for a later submission to FDA and storage in an external SAP system. Data is collected within separate questionnaires. Questionnaires and user roles can be created and configured in a free manner by administrators while offering maximum flexibility.

Technics:

- Frontend via AngularJS and special self-developed JavaScript based ORM wrapper
- HTML 5
- LESS
- JavaScript (native)
- JSON / XML

- GIT

## Realization of a multilingual intranet portal in SharePoint 2013

MAY 2014 — MAY 2014

**Type:** Main job (full time)  
**Company:** novaCapta Software & Consulting GmbH  
**Function:** Lead, Architect, Development  
**Customer:** Worldwide leading company in mounting and assembly technology

*Development of a multilingual intranet portal in SharePoint 2013 for management of internal continuous improvement process (KVP)*

Within the application users can submit and value improvement proposals and active measures. Target of the application is to shorten the process of transferring improvement proposals and encouraging employees via incentive measures to participate at the company improvement. Submitted improvement proposals can be valued by a five-star-ranking.

Technics:

- SharePoint coupled adjustments and overload of rendering via TypeScript
- GIT

## Single Page Application for timekeeping and project controlling in SharePoint 2007

NOVEMBER 2013 — AUGUST 2014

**Type:** Main job (full time)  
**Company:** novaCapta Software & Consulting GmbH  
**Function:** Lead, Architect, Development  
**Customer:** Leading DAX company in information technology

*Development of a single page application based on AngularJS and SharePoint 2007 with usage of SharePoint SOAP Webservices*

The application enables employees to track their project times. Lead employees can manage and plan the assignments of projects to accounts, budgets and current costs. Additionally, this tool offers a management and planning of internal and external.

Technics:

- Frontend via AngularJS 1.4 and special self-developed JavaScript based ORM wrapper
- HTML
- LESS
- JavaScript (native)
- JSON / XML



- GIT

## API development for an interface on SharePoint Service Applications

JANUARY 2013 — MAY 2013

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Architect, Development

**Customer:** Internal

*Development of an API for communication between SharePoint application server instances within a SharePoint application for management of semantic ontologies*

Technics:

- ASP.Net (C#)
- Microsoft Team Foundation Server

## Management-/Reporting application for market research

JANUARY 2012 — JUNE 2012

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Sector:** Market research / Market analysis

*Development of a full-stack application for data submission and reporting of master data and sales data in retail industry*

A web based MVC application has been developed for market research analysis on purchase behavior of customers. Sales data can be imported and managed within the application. Additionally, a web-based designer has been created for a flexible creation, configuration and planning of customer-based reports on purchase behavior. These reports provide detailed information e.g. on behavior of rebuyers as well as product cannibalization.

Additionally, an interface has been developed to integrate the exposure of reports based on SQL Server Reporting Services within the MVC application.

The application is furthermore extended with a REST API for data maintenance through an external tablet app by field staff.

Technics:

- Web application und REST-API with ASP.Net MVC 4 (C#) and Entity Framework
- Report Designer via Silverlight
- Public-facing reports via MS SQL Reporting Services
- OpenXML
- HTML / CSS / JavaScript (jQuery)

- MSSQL
- T-SQL
- Data import via Windows Service
- Data export via Windows Service
- Subversion

## Marketing Facebook application

MARCH 2011 — MAY 2011

**Type:** Main job (full time)

**Company:** novaCapta Software & Consulting GmbH

**Function:** Lead, Architect, Development

**Sector:** Machine engineering/ Robotics

*Development of a Facebook application within the scope of a marketing campaign*

Within the scope of a marketing campaign a Facebook application has been developed to automatically create posts on the user wall according to user-specific settings.

The administrative application configuration is done by a special WPF client application which communicates via REST API with the web application behind the Facebook app.

Technics:

- Web application and REST-API with ASP.Net MVC 4 (C#)
- WPF client application for administration (C#)
- Subversion

## Migration of an intranet application for product data maintenance

OCTOBER 2008 — JANUARY 2009

**Type:** Main job (full time)

**Company:** Schaeffler Automotive Aftermarket oHG

**Function:** Lead, Architect, Development

**Customer:** Internal

*Migration of the PHP-based application to Python and development of an application for data maintenance of product data during a product creation process*

The original PHP based application for data maintenance of product base data for preparation on product portfolio inclusion (AMIS) has been redeveloped on top of the Python framework „Django“. The original SAP interface within the PHP application was migrated as well.

In scope of the complete migration an additional external application for data maintenance during a product creation process was redesigned and integrated into the target application. All separate data maintenance steps were developed as plugins in order to achieve highest possible flexibility.

#### Technics:

- Application via Django (Python)
- PostgreSQL
- pl/pgsql
- Linux
- HTML / CSS / JavaScript (native, mootools)
- Scheduled Imports via Cronjob
- Data transfer to SAP via Cronjob und custom SAP RFC Function
- Subversion

### Community- and Statistics platform for online game

OCTOBER 2007 — SEPTEMBER 2010

**Type:** Private

*An additional community- and statistics platform for game data analysis has been developed for the online game „Tribalwars“*

The platform is an additional community- and statistic web application for the online game „Tribalwars“ (provided by the company „InnoGames“). The data to be reported was collected on a 30-minute frequency for all game worlds (worldwide: > 200 game worlds). With the usage of these available data statistical and graphical analysis was provided in real-time. For operation the Debian 4.0 Server have been used to virtualize more then 20 virtual servers. The platform was able to handle 60.000 unique visitors per day (240.000 page impressions) with an average data transfer of 1.2 GB and was the biggest community platform for an online browser game worldwide at that time.

#### Technics:

- Application via Django (Python)
- HTML / CSS / JavaScript (native, mootools)
- PostgreSQL
- pl/pgsql
- Linux
- Scheduled Imports via Bash-Scripting
- Mercurial
- Nagios / Xen

### Data maintenance of product data

2007

**Type:** Main job (full time)

**Company:** Schaeffler Automotive Aftermarket oHG

**Function:** Lead, Architect, Development

**Customer:** Internal

*Development of a web-based intranet application for maintaining product base data*

AMIS is an intranet application used by Schaeffler Aftermarket to collect product base data in preparation for inclusion in the official product portfolio. AMIS has been developed on top of a self-developed PHP Framework and uses MSSQL as a database. Additionally, an SAP interface has been developed to send the published data to the corporate SAP system.

Technics:

- Integration of the self-developed PHP MVC Framework (PHP 4)
- HTML / CSS / JavaScript (native, mootools)
- MSSQL
- T-SQL
- Linux
- Data transfer to SAP via Cronjob and custom SAP RFC Function
- Subversion

## PHP MVC Framework

2006

**Type:** Private

Development of a MVC Framework in PHP by using common design patterns (MVC, Observer, Proxy, Dispatcher, ...). The MVC concept was extended by a separate rendering component by which the framework was ready for creating content in multiple formats (HTML, XML, PDF, Excel, Image, ...). Due to a consequent loose coupling external DBAL (e.g. PEAR, phplib) and rendering engines (e.g. Smarty) could be used.

Technics:

- PHP 4
- Subversion

## SAP Rollout

2004 — 2006

**Type:** Main job (full time)

**Company:** Schaeffler Automotive Aftermarket oHG

**Function:** Architect, Development

**Customer:** Internal

Responsible for all tasks concerning data migration. Data from legacy systems (AS 400 and others – 1.5 GB text-based data) have been validated, transformed and prepared for the following import via SAP R/3 by extensive SQL procedures on a MSSQL database server.

Technics:

- ABAP
- IM/3
- MSSQL

- T-SQL
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## Further training

### Certificate as MCSD: SharePoint Applications

NOVEMBER 2015

### Certificate as MCSD: Web Applications

SEPTEMBER 2015

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## Publications

### CQRS in ASP.Net MVC with Entity Framework

AUGUST 2015

Link: <http://www.blog.novacapta.de/Seiten/CQRS-in-ASPNet-MVC-mit-Entity-Framework.aspx>

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## Additional knowledge

### Programming languages

PHP	(since 1999)
Perl	(since 2001)
Delphi	(since 2001)
ABAP	(since 2004)
Python	(since 2007)
C#	(since 2009)
PowerShell	(since 2016)
Dart	(since 2022)
Kotlin	(since 2023)

SQL (including the procedural extensions TSQL and pl/pgsql)

HTML / LESS / SASS / CSS / JavaScript / TypeScript

XML / XSLT / XPath

Bash- / Shell-Scripting

### Applications / Frameworks

Databases:

- MySQL
- MS SQL

- PostgreSQL
- RavenDB
- MongoDB

#### Applications / Frameworks:

- Typo3
- Django
- SAP R/3 und IM/3
- Flutter
- Jetpack Compose
- AngularJS
- VueJS
- MithrilJS
- ReactJS
- Bootstrap
- ASP.Net MVC / ASP.Net Web API
- .Net Core
- NUnit
- xUnit
- Entity Framework / Entity Framework Core
- Elasticsearch
- Composite C1 / Orkestra C1
- OrchardCMS
- SharePoint 2007-2019 / SharePoint Online
- ShareGate

#### Additionally:

- Linux (Debian, Ubuntu)
- Eclipse, Visual Studio
- Nagios, Xen
- Subversion, Mercurial, GIT
- Microsoft Azure
  - DevOps
  - Blob Storage
  - Docker Container Registry
  - Web App
  - Managed Kubernetes
  - Service Bus
  - Application Insights
- GraphQL
- Docker
- Kubernetes

# References

References available upon request