

# MICHAEL JUSTUS

## PERSONAL DETAILS

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## PROFILE

**Technical Architect / Senior Software Engineer** with 15+ years of experience across various industries, including financials & pensions, transportation, waste management investment management and supply chain risk management. Has designed and developed microservice architectures, APIs, asset tracking solutions, web front-ends, service-based back-ends and supporting data models (for relational, document or graph storage). Solutions enabled organisations to govern data flow reliably and improved operations through the delivery of well-built and tested solutions. Possesses strong hands-on development skills, has worked in collaborative in **Agile** teams that used a variety of technologies, most notably C#, JavaScript, SQL and Graph databases. Delivered numerous reliable solutions developed from scratch, that covered all aspects of design from back-end to front-end using best-practices always.

Possesses resourceful and approachable leadership skills combined with strong collaborative abilities, which have helped to create motivated and high performing teams. Effective stakeholder management skills as well as the ability to convey technical concepts to business teams, have ensured business buy-in to proposed solutions and smooth delivery of projects. Received consistent feedback for being a valued team member due to having a “can-do” attitude, keen eye for detail as well as the ability to see the big picture from both technical and commercial perspective.

## TECHNICAL SKILLS SUMMARY

Languages:	C#, JavaScript, TypeScript, HTML, CSS, Delphi, Visual Basic, JSON, XML, VBA, PowerShell, T-SQL, Cypher.
Software Practices:	Unit Testing, Agile Development, VSTFS, Git, SOLID principles, Object-Orientated Design.
Databases:	Microsoft SQL Server, Neo4j, SQL Compact, Couchbase, MySQL.
Software Frameworks:	NHibernate, Ninject, Entity Framework, .NET (including ASP.NET, .NET Core), Castle Windsor, Identity framework, jQuery, knock-out.js, Angular, AutoMapper, Json.NET, NLog, LINQ, OpenXML.
Development Tools:	Visual Studio 2019, Visual Studio Code, RAD Studio
Operating Systems:	Microsoft Windows 8, CE 7 / 6 / 5, Windows Embedded, Windows 10
Other:	Tyk (API Gateway), Docker Containers, Micro-service architectures, Service-Orientated architectures, OpenAPI, UML, ArchiMate 3.2, TOGAF 9.2, SOAP, QlikView, Crystal Reports, OAuth 2.0, Windows Forms, nServiceBus, MSMQ, Amazon SES.
Non-Commercial Skills:	Artificial Intelligence, Machine Learning, Cloud Architectures, Java, Python, Sparx EA Modelling Tool

*References available on request*

## EMPLOYMENT HISTORY

*Jan 2016 – Sep 2020*

*Achilles Information Limited, Abingdon, UK*

Achilles enables buyers to make data-driven purchasing decisions about suppliers via validated, risk-assessed supplier data. The company operates in the UK, Spain, Latin America, Europe, and the United States.

**Technical Architect** worked in an Agile environment, collaborated with 3 Architects and various Scrum teams (onshore and offshore) on a digital transformation project to design, manage and guide solution delivery. The strategic objective was for architects to reduce 22 legacy systems to a core set, centralise MDM, introduce architecture design standards and documentation and deliver APIs to integrate systems including Subscription Management and CRM.

## RESPONSIBILITIES

- Develop and maintain solution architectures using microservice architectures and graph data models
- Collaborate with onshore and offshore stakeholders, confirm solution designs, resolve design conflicts and integrate business requirements into solution artefacts, deliver architecture solution artefacts on time.
- Evangelise architecture direction and solution design with assigned development teams
- Evaluate and arrange product demonstrations for off-the-shelf products as needed, for example, Subscription Management, Customer User Experience Insights, Business Intelligence, Analytics Insights, API Gateways
- Perform regular code reviews to maintain code quality and adherence to architecture standards
- Develop OpenAPI specifications and deploy into an API gateway (Tyk API Gateway)

- Perform graph data modelling in neo4j to support proposed solutions
- Code proofs-of-concept (using C#) for products such as nServiceBus, Amazon SES, GraphQL and Kafka
- Work with development teams to provide hands-on coding using C# .NET Core, JavaScript, TypeScript, Cypher, T-SQL, Angular.
- Maintain legacy website, ASP.NET services (with AutoMapper) and existing Couchbase data

#### ACHIEVEMENTS

- Increasing overall search performance (using SQL Server) helped the business retain customers as it facilitated faster data capture and submission of customers' online data. Additionally, enhanced end-user experience through improved search performance (using SQL) to ~3 seconds down from ~1 minute, using dynamically SQL statements based on user-selected web filters.
- Boosted confidence in the architecture team artefacts due to regular well-regarded reviews by external process auditors. This was achieved by raising the quality standard for architecture artefacts by focusing on modelling principles such as document layout and reduction of "line crossings".
- Built a reputation for reliability and attention-to-detail. Reviews and feedback on solution designs were frequently requested above other Architects to ensure delivery of new solution designs in shorter periods.
- Collaborated with senior management and worked on business strategies and governance processes. This ensured more efficient requirements gathering, architecture evangelising and working with diverse stakeholders.

**SKILLS SNAPSHOT** Agile methodology, OpenAPI, C#, .NET Core, JavaScript, ASP.NET, HTML, Angular, Neo4j, Couchbase, Microsoft SQL Server, T-SQL, Cypher, GraphQL, TypeScript, Tyk API Gateway, nServiceBus, Microservices, Amazon SES, Stakeholder Management, Code Reviews, Architecture Design, Data Modelling, Kafka, OAuth2.0, AutoMapper

Sep. 2014 – Aug. 2015

*Dariel Solutions, South Africa*

Specialists in bespoke software solutions for clients in South Africa in various industries such as healthcare management (Life Private Medical), tourism (CitiLodge), AI (Absa) and media (MultiChoice).

**Senior Software Developer / Web Developer** worked in an Agile team, including Business Analysts, Architects, User Interface Designers and Developers to deliver the **Field Services Installer Website** project that required rewriting the client's website. The project was part of a larger SOA effort involving .NET thick clients, web front end and Android mobile clients (written in C#) with a server running WebMethods.

#### RESPONSIBILITIES

- Developed web pages and web services using C#, ASP.NET, HTML, CSS, JavaScript, JQuery, knockout.js, T-SQL, Entity Framework and VSTFS.
- After every release sprint, presented the customer with a working demonstration of achievements that helped them steer development requests for the following development cycle.
- Collaborate daily with the Development Manager, Business Analysts And Architects on complex business rules and processes. The discussions often centred around usability towards the best customer experience.
- Provide development assistance to junior team members to ensure timely delivery for each sprint.

#### ACHIEVEMENTS

- Dariel solutions was well-known across the South African market for their high standards of work and development quality. Working for them provided an opportunity to collaborate with a team of well-respected colleagues in one of South Africa's leading software engineering companies and found I was able to rise to the challenge required for high-quality web development.
- Delivered a web site that met the customer's business requirements to support their thousands of existing customers as they transitioned from their old product onto the rewritten site.

**SKILLS SNAPSHOT** Agile methodology, C#, ASP.NET, HTML, CSS, Knockout.js, JavaScript, jQuery, T-SQL, Entity Framework, VSTFS.

Mar. 2014 – Sep. 2014

*mCommerce Solutions, South Africa*

Developer of specialist solutions using RFID technology that enables real-time tracking features. They operate within Africa and delivered asset tracking solutions to one of Namibia's largest private holding companies.

**Senior Software Engineer / C# Software Developer** contracted to design and develop from scratch a handheld asset tracking solution using C#, SQL Express (and Compact), Entity Framework, JSON, T-SQL, Windows Forms (using MVVM), RFID tags. Asset movement records were synchronised to the customer's SAP ERP system using in-memory ZIP files, X.509 certificates and SOAP web services. Used Agile principles in this role.

#### RESPONSIBILITIES

- Led the software design and development of the solution including the back-end and front-end components.
- Provided daily progress updates, and ensured technical approach was appropriate to meet business requirements consistently.

- Worked on-site with the customer in Namibia to collaborate and elicit changes or approvals of business processes, data flows and security requirements.
- Provided on-site training and well-documented user manuals.

#### PROJECTS

##### 1. RFID-based Mobile Asset Tracker

The solution provided the ability to track the movement of corporate assets, verify those assets within business units and provide the client with near real-time tracking insights.

- Designed and coded the mobile handheld solution front-end, and back-end using C#, Windows Forms (using multithreading techniques and MVVM pattern), SQL Compact, JSON, SOAP web services, Entity Framework.
- Worked as a lead C# .Net developer and Solution Designer / Architect within a team consisting of an SAP Group Manager, IT Manager, Managing Director and key customer stakeholders and end-users
- Collaborated with the SAP developer to securely upload and download inventory data and asset movements into their SAP ERP inventory using X.509 certificates

#### ACHIEVEMENTS

- Delivered a complete solution within budget and time constraints that provided valuable real-time asset location data fed into their SAP ERP inventory system. This data assisted asset verification processes and helped to manage the transfer of assets between business units.
- The solution supported the client in addressing established group auditing requirements through accurate asset verification processes and reports (Qlikview)
- Delivered a solution that operated with minimal production issues and maintenance costs, saving the customer money on support calls and bug fixes.

**SKILLS SNAPSHOT** C#, JSON, SQL Compact, RFID, SOAP, Windows CE, Entity Framework, LINQ, T-SQL, multithreading, X.509, MVVM, Solution Design, Mobile Handhelds, QlikView

*Dec. 2011 – Feb. 2014*

*TransAfrica Asset Control Technologies, South Africa*

Supplier of software solutions using RFID technology for various industries, such as medical, farming and mining within Africa. Clients included Rutongo Mines (Rwanda), B2Gold (Namibia) and local farmers (South Africa).

**Senior Software Engineer** using Agile principles and working in a team of developers, a project manager and a lead developer to design and deliver solutions described by the projects below. Designed, built and maintained Windows applications and services, using C#, Windows Forms, web services, T-SQL, ADO.NET and reports in Excel or Crystal Reports, and implement best coding practices. Ensured code was tested and improved the stability of existing systems and data structures.

#### PROJECTS

##### 1. Open-Cast Tin Mining Solution

The solution helped to reduce the time taken by open-cast tin-miners in Rwanda to log their mined ore bags to 15 seconds down from previous times of over 10 minutes without RFID technology.

- Introduced WCF web services that were written in C# to synchronise data recorded (RFID tags, bag weight, mine location) between client sites and the mine's central server and configured using XML config files
- Developed Excel-based reports using open-source OpenXML SDK that provided management with data insights about miners' output

##### 2. Gold Mine Fuel Tracking Solution

The solution provided mining operation management with accurate insights into fuel usage and helped to improve fuel cost management.

- Acted as Solution Architect and Software Developer to design and code site-wide mobile solution. The solution used C#, Windows Forms, Windows CE, SQL Express / SQL Compact, T-SQL, JSON messages sent over serial ports, RFID, IO sensors, fuel flow sensors, GPS sensors.
- Developed an offline device emulation framework to test the solution without connection to hardware devices.

##### 3. Animal Feed-lot Rationing Solution

The solution helped farmers to accurately load feed rations ingredients in the correct amount, leading to less product wastage and accurate cost projections.

- Worked with a colleague to develop, test and maintain existing Windows Forms solution using C#, SQL Express, T-SQL, XML configuration files, Windows 7 Embedded, ADO.NET, RFID, Scale Device

#### ACHIEVEMENTS

- Worked well under extreme deadlines for delivery of Fuel Tracking solution thanks in part to the custom device emulation framework I built to test and improve all business processes while out-in-the-field.
- Helped guide improvements in code quality and development practices by discussing best practices, service-based architectures and C# language constructs.
- Delivered a Fuel Tracking solution interface using best user interface design practice that enabled non-English operators to register their operator cards and to quickly and efficiently use the mobile system.

**SKILLS SNAPSHOT** Agile principles, C#, WCF, XML, OpenXML, T-SQL, SQL Server Express, SQL Compact, ADO.NET, JSON, Windows Forms, RFID, SOAP, Windows CE, Windows 7 Embedded, Entity Framework, LINQ, Multithreading, MVVM, Hardware Devices, GPS Sensors, Fuel Flow Sensors, IO Sensors, Serial Communications

Nov. 2010 – Dec 2012

*Investec, South Africa*

A private bank, operating within South Africa and the UK, offering corporate banking, investment and asset management services.

**Senior .NET Developer** working in an Agile team consisting of a Contract Integration Architect, Solution Architect, Business Analysts, and Developers to develop internally used solutions. Worked with the Database Management team to design support tables, procedures and views and to collaboratively resolve performance issues. Provided daily progress updates, and ensured the technical approach was suitable to meet business requirements consistently.

#### PROJECTS

1. Real-time Market Price Streamer and Service

There was a need to retrieve real-time stock prices from the local stock exchange and provide this information to web customers and other internal systems.

- Developed a back-end solution in C# using WCF, Windows Services, T-SQL and MSMQ to connect into the Johannesburg Stock Exchange and stream live market prices using the FIX 4.2 protocol. Worked in an Agile environment to deliver the solution and regularly consulted SMEs to address FIX 4.2 processing queries.
- Developed WCF web service in C# to expose live market data from SQL data storage using optimised SQL views to obtain market prices and convert them between two currencies using SQL stored procedures.

2. Broker Dealing Account Screen scraper

The client wanted to automate posting client transaction journals to free up resources and improve posting efficiency. Developed, designed, tested and deployed a screen-scraper to automate the input of journal entries into the customer's BDA system.

#### ACHIEVEMENTS

- Invited to be an active member of the internal Architecture Forum. Attendees provided input into architectural decisions and technical guidance for projects within the teams. These decisions ensured development teams made sound technical decisions with little impact on business cost.
- Delivered high-performing SQL structures that supported real-time streaming of market prices to multiple connected end-users with support for auto-recovery if the service failed.

**SKILLS SNAPSHOT** Agile Methodology, C#, FIX 4.2, WCF, Windows Services, MSMQ, T-SQL, SQL stored procedures, SQL views, Data Design,

## EDUCATION & QUALIFICATIONS

2001: National Diploma Information Tech.