



Morné Fourie

.NET Software Architect.

Team Lead.

Full-stack MVC .NET Developer.

Javascript Developer.

SQL Developer.

Inquisitive Thinker.

Passionate Mentor.



Morné Fourie

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PROFESSIONAL PROFILE

I started programming at the age of 14, and received a national award in the same year.

Today I am a **customer focussed** senior .NET developer with a passion for **well architected solutions** that deliver **business value** early on. The detail is important to me.

I love exchanging ideas and mentoring hungry developers. My team often hears me rant about the importance of the **SOLID principles** and leaving architectural choices to the **last responsible moment**.

I believe in building the **simplest solution first**, allowing the relevant design patterns to emerge naturally as part of the refactoring process.

I follow best practice coding standards in the form of the **.NET Framework Design Guidelines** as documented on MSDN. Any developer who is familiar with the .NET framework, will be comfortable with the code conventions in the delivered codebase.

Robust, readable and maintainable code is important to me. Short deployment cycles are more important than avoiding minor bugs.

Every project is different. I use the best tools for the job. Refactoring and code quality tools are standard. I have a professional and systematic approach to everything I do.

I charge a little more because I invest a lot of time in sharpening my skills and staying abreast of the latest technologies. **“If you think hiring a professional is expensive, wait ‘til you see what an amateur costs you”**

What I do

MY SKILLS AND EXPERIENCE.

.NET Development

I specialise in ASP.NET Core web development, with a strong focus on Web API's and MVC frameworks.

- ASP.NET Core & ASP.NET Framework
- ASP.NET MVC & Web API framework
- NancyFX MVC & API framework
- Identity Server, OAuth2, OpenID Connect, JWT
- Policy Server authorisation
- REST, GraphQL, SOAP, WCF
- MSMQ / NServiceBus / RabbitMQ / Redis
- Entity Framework, Dapper, Marten
- StructureMap, Lamar and Core built-in IoC Containers
- SeriLog, Log4Net and many more
- xUnit, NUnit, MS Test
- Active Directory, LDAP Integration
- Windows Forms, WPF
- ASP.NET Web Forms

Micro-services

I help teams on their containerisation journey:

- Deep experience in Docker, Kubernetes, Helm
- OpenShift experience
- ServiceFabric experience

Front-end Development

As a JavaScript and TypeScript developer, I spend my time with:

- HTML5 / CSS3
- Javascript / ES6 / TypeScript

- NPM / WebPack / JWT
- Angular / ReactJS / jQuery
- Bootstrap / Material Design
- Automated End to End testing

SQL Development

When database requirements go beyond CRUD and ORMs, I focus on:

- SQL Server & PostgreSQL
- Trees & Hierarchies
- JSON & JSONB data
- Database design
- Database source control
- Views and Stored Procedures
- Indexing and Performance Tuning
- Custom DPEs for SSRS
- SQL Server Geography and Geometry APIs
- SQL Server Data Replication
- High Availability
- Disaster Recovery

Java Development

My Java skills come in handy when .NET and Java teams integrate on larger projects. I have experience in:

- Spring Boot / MVC / IOC
- SOAP / REST Web Services
- JSP / Vaadin
- JPA / Hibernate / Gorm
- JUnit
- Log4J
- Grails
- LDAP / Active Directory Integration

Integration with Financial Systems

I have extensive experience in the financial sector. My billing engine (2011-2016) passed Deloitte audits every year. I have a deep understanding of:

- Accounting Systems
- Corporate Investment Banking platforms
- Peer to peer lending platforms
- TransUnion and Experian credit bureau APIs
- PaySoft Bank Verification API
- Integration with Pastel Partner (my own API)
- Integration with Sage Evolution SDK
- SagePay Debit Orders
- SagePay Payment Gateway
- PayFast Payment Gateway
- Absa Host-to-Host service
- FNB SFTP service

DevOps and Infrastructure

I feel right at home with:

- CI/CD & GitOps
- TeamCity, Jenkins, Octopus
- Azure Pipelines
- Git, Git Flow, Trunk-based Development
- IIS, Apache, Nginx, Kestrel
- Jira & Confluence
- Automated end to end testing
- Postman & Fiddler

Curriculum Vitae

My education and experience.

EDUCATION

Self-study: 2005 - Current

I keep abreast of the latest technologies by following open source repositories, podcasts, blogs and Twitter feeds. I also watch training videos and read books on the latest development topics.

National Certificate in Datametrics: UNISA 2003 - 2004

My studies centered around systems analysis and various design methodologies. I use UML, Use Case, Flow Control, Timelines and other diagrams in my technical documents.

Advanced Delphi and Oracle Course: Dakota Training Centre 2002

My first in-house CRM was written in Delphi. This course helped me to master the more advanced concepts, and also introduced me to Oracle databases.

Microsoft Certified Systems Engineer (MCSE): Dynamix Training Centre 2000

My MSCE certification enabled me to administer and maintain Microsoft Windows Servers and provided me with the necessary network skills.

EXPERIENCE

2018 - Current - Identity and Authorization platform: DVT / ABSA CIB

As part of the Barclays exit strategy, ABSA CIB needed to implement new portals for their Corporate Investment Banking clients. As a DVT contractor I was tasked to redesign and implement their data security stack, using OAuth2, OpenID Connect and authorisation policies. Identity != Permissions.

2017 - Peer to Peer Lending Platform: DVT / RainFin / 4AX

Rainfin invited us back to help solve inefficiencies in their system. We were able to address many performance issues and added much needed features for them to expand into new markets.

We also implemented a lending platform for the 4AX exchange, who partnered with Rainfin to boost SME growth in Africa.

2017 - VIN Database: DVT / MiX Telematics / Matrix Vehicle Tracking

MiX Telematics needed to create more efficiencies in terms of their tracking device installations. As a DVT contractor I was asked to design and implement a VIN database and API that would query external providers to store the Make, Model, Year of a vehicle based on its VIN number. The application provided a way to build proprietary device scripts from known snippets based on the VIN number.

2015-2016 - Custom Data Processing Extensions (DLLs) for SSRS: DVT / MiX Telematics / Matrix Vehicle Tracking

It is estimated that only 20% of all data is tabular and can be stored in relational databases. MiX Telematics needed their SSRS reports to bind to other data sources like SOAP and REST Web Services.

Enter the Custom Data Processing Extension (DPE)! As a DVT contractor I was responsible for implementing a set of DLLs for deployment alongside SSRS, to enable RDLs to access non-SQL data via Web Services.

Complex business rules could be implemented and data could be merged from various sources, greatly simplifying the report design.

I was also responsible for implementing changes to the ETL processes from the OLAP databases to the Staging and Warehouse databases.

Part of my support duties was to troubleshoot trip data using SQL Server Geography and Geometry APIs.

2015 - Peer to Peer Lending Platform: DVT / RainFin / Absa

RainFin's lending marketplace is an alternative way to borrow or lend money. It directly connects borrowers and lenders, allowing for cheaper credit for borrowers and better returns for lenders.

As a DVT contractor I was responsible for completing the SME version of the application, along with 3 other developers. I learnt from one of the best architects in South Africa.

We also ported the PHP version of the Personal Loans application to a .NET MVC application.

The Personal and SME applications consumed web services exposed by the core system, and also did live credit checks.

2010 - 2015 – Various Projects: Curro Holdings

2014 - 2015 - Solutions Architect and Project Manager

Curro Holdings upgraded both their academic and financial systems in 2014. The 3rd party academic system was retired in favour of a new in-house web-based system built on Grails and Vaadin.

As project manager I was responsible for gathering user requirements from academic and financial specialists. We collaborated on a shared specification document, which I enhanced with technical details and UI wireframes.

I managed an agile process with the external developers using Jira.

2014 - Data migrations from Pastel Partner to Sage Evolution

The business needed to migrate their Customer, Supplier and General Ledger history from 50 separate Pastel Partner databases into 10 Sage Evolution databases. Evolution was configured with segmented GL's and branch accounting.

I combined my own Pastel Partner SDK with the Sage Evolution SDK to migrate the transactions to the new system.

The trial balances were signed off by the financial department and balanced to the cent. Deloitte audits were also successful.

2014 - Budget Manager Application (Java EE)

When a junior Java developer unexpectedly resigned, I had to cross over to the "dark side" to rescue a Budget Manager Spring MVC application to meet deadlines.

The application was used by management for budget forecasting from historical data and external sources.

2013 – 2014 - Database replication to 33 sites

Do you remember 4MB ADSL? Because of slow internet connections between schools, Curro could not centralise their critical systems. Financial data resided at the Head Office while academic data was managed at each school.

I implemented and monitored a replication strategy to synchronise financial and academic data between sites.

I used SQL Server Merge Replication and an ASP.NET web portal on each site so that the staff members could process invoices and billing remotely.

2012 – 2013 - ETL implementations (SSIS)

We ran a very lean operation in those days. Besides Software Development I also wore the database administrator hat. I implemented ETL processes to stage subsets of data on the company's public facing website.

The data was used by the self-help customer portal.

2012 – 2013 - Reporting (SSRS)

I designed a number of web-based reports using SSRS.

The reports were used by financial users, including auditors.

2012 – 2014 - Debit Order implementation

Curro retired their bank's debit order system in favour of a new ASP.NET web platform where the school bursars could efficiently administer the parents' debit orders.

The debit order system interfaced with Netcash (now SagePay) and fed transactions into Pastel Partner (and later Sage Evolution).

2010 – 2014 - Billing Engine

I designed and implemented the Synergy billing engine which was at the heart of Curro's cashflow provisioning.

The billing system would take inputs such as attendance records and class lists from the 3rd party academic system for monthly billing. I implemented an ASP.NET solution that would generate monthly batches for import into Pastel Partner. Exception reporting helped the bursars to validate the external inputs before generating the monthly invoices.

In 2015 Synergy generated more than 30000 monthly invoices for study fees and other adhoc fees and stored them in Sage Evolution.

Parents could view their statements online and pay online.

If you think hiring a professional is expensive, wait 'til you see what an amateur costs you.

I'm a Lead .NET developer at [DVT](#) in Cape Town, where I develop custom software solutions for our clients.

Let me know what your needs are. Then let's set up a meeting.



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