





DAAN MORTIER

SOFTWARE ARCHITECT

CONTACT

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INTRODUCTION

I signed my first client when I was 14. In a time when the internet was still frequently called 'The digital highway', I was able to convince a small gift shop to let me build their website. I didn't have my own computer, so in order to learn HTML I resorted to printing out source code at school and taking it home to study. I had no idea how to register a domain name or set up proper hosting, but by the end of the project I was able to present to them a properly working site, including Flash animation, securely hosted with their own domain name. The agreed-upon sum of 400 guilders — far too little — was kindly paid on time, and I had caught the bug.

Nowadays I develop the software behind websites and applications; an interesting and diverse job that still interests me very much. I develop primarily in JavaScript, and I have a lot of prior experience in PHP. I have an eye for details, but I always keep them in perspective with regards to the bigger picture. I believe that refactoring and testing is essential to keeping a project healthy and running well, and I'm passionate about well-structured and easily readable code. I always remember this funny quote on the topic: "Always write software as if the guy who ends up maintaining your code will be a violent psychopath who knows where you live". When developing, I always keep my successors and collaborators in mind to try to deliver the best code I can.

I believe in the same values when leading projects. I streamline development by focusing on planning, communication and results, but I also understand the importance of a decent test suite, and taking the time to set up a good structure and maintain documentation. Furthermore, I strongly believe in running a team based on trust; when given, team members will take responsibility and do great work.

I haven't lost the eagerness to learn that I discovered in my younger years. I still think the Internet is a magical place, and I keep finding it exhilarating to get involved in a new project. Having to read up on new topics and learn about worlds I was previously unaware of is something that will never get old.



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PROFILE

More than 25 years experience in designing and developing internet connected software. I am creative, involved, pragmatic and focused on the end-user. I like to work precise and structured.

EDUCATION

BACHELOR ART & TECHNOLOGY

Saxion Hogescholen 2003 - 2008

ATHENEUM

SSG De Rede 1996 - 2002

SKILLS

SOFTWARE ARCHITECT

LEAD DEVELOPER

FULL STACK DEVELOPER

REFACTORING

UX

DEVOPS

CONSULTANT

EXPERIENCE

LEAD DEVELOPER

Rolsch Assetmanagement

Javascript, Node.js, PHP, MySQL, Mapnik

Development of a GIS application for managing the dutch drink- and waste water network. The primary goal is saving costs by working more efficiently. To do this, the system prioritises certain assets with advanced calculation engines that use environmental characteristics and hydraulic properties of the network.

- Designed the database and software.
- Developed the hydraulic calculation engine.
- Developed the front- and backend.
- Created DevOps environment.
- Server park installation and management.
- Lead the development team.
- Direct customer contact.

Video:

<https://www.daanmortier.nl/video/impressie.mp4>

DEVELOPER, CONSULTANT

Watertaxi Rotterdam

JavaScript, React, Node.js, MySQL, QGIS, AWS

The Watertaxi wanted a new tariff system with dynamic pricing properties. Amongst others, the price is influenced by the route taken (city zones, price per kilometer), properties of the traveling party and day of the week.

In order to implement all the parameters I created a real-time routable digital model of the Rotterdam harbor in order to be able to determine the applicable city zones and distance travelled for every trip. The algorithm was able to combine this information with pre-configured travel patterns to calculate the correct price taking into account all relevant parameters. It was set up so that these travel patterns were very easy to adapt to future wishes, making it very quick and easy to adapt to new needs.

Further work:

- Managed development of the iPad app for digital payments on the boats.
- R&D interface work for the booking- and payment applications.
- Consultancy for refactoring the planning software.
- Development of computer aided animations of daily boat movement for PR purposes.

Videos:

<https://www.daanmortier.nl/video/tariefsysteem.mp4>

<https://www.daanmortier.nl/video/vaarbewegingen.mp4>

KNOWLEDGE

MAC OS X / UBUNTU LINUX

APACHE

GIT

MYSQL / POSTGRES

OO PROGRAMMING

FUNCTIONAL PROGRAMMING

JAVASCRIPT + DOM

NODE.JS

HTML

CSS

SQL

BASH

PHP

LANGUAGES

DUTCH (FLUENT)

ENGLISH (FLUENT)

GERMAN (BASIC)

INTERESTS

I love the outdoors and classic trades. Every year I try to sneak out for a few weeks with my motorcycle and tent to explore some part of Europe. Next to that I love off-piste skiing in deep, fresh powder snow — nothing can beat that feeling.

At home I have my own wood workshop where I restore old tools and build my own handmade furniture.

EXPERIENCE

(CONTINUED)

DEVELOPER

Gemeente Amsterdam JavaScript, React, Node.js, PostgreSQL, Jenkins

Development of an algorithm for the market bureau of Amsterdam. The algorithm is responsible for assigning all salesmen to a stall on a market of their choosing.

The biggest challenge laid in the fact that the calculation could not be optimised for a single parameter. Simply optimising for maximum amount of allocations or maximum financial gain was insufficient. Salesmen happiness and merchandise diversity were equally as important.

I delivered an algorithm that took all parameters into account and tried to select the most optimal outcome. In order to be able to continuously improve the results without fear of regressing errors I set up a test suite asserting all functional requirements with 100% code coverage.

The algorithm is [open-source](#).

DEVELOPER

Streeklab Haarlem JavaScript, Node.js, MySQL

Streeklab Haarlem performs PCR Corona tests. These tests are done by robots that can process 96 individual PCR samples every run. Because the output of these robots is not very human-readable I developed an application to check the results and send them through to the internal hospital information system.

Because the lab processes thousands of tests every day there was a big focus on user friendliness and speed of use. Besides big buttons, good legibility and sufficient contrast the entire application is controllable by keyboard, making it easy for users who appreciate this kind of interaction to work from muscle memory.

Responsibilities:

- Design & development custom front- and backend.
- Reliable connection with the robots and hospital systems.
- Big focus on faultless operation — erroneous data processing is unacceptable.

DEVELOPER

LocatieLAB React, Node.js, Postgres, Docker, GraphQL

In three months time I thoroughly refactored the software of a real estate development company. I rid the product of many bugs and prepared it for long term future development. Since the software was very recently developed and appeared to contain some good ideas I wanted to keep as much of it as I could to speed up the process.

In order to increase the product's reliability I chose to simplify it's tech stack. Seeing as there were no good arguments for using GraphQL in this case I eliminated it and chose a more traditional direct connection to the database. This made reasoning about the codebase considerably easier, resulting in the preservation of a large portion of the remaining codebase.

Next to that I brought the many smaller modules together into a single monorepo, resulting in a simplification of both the front- and backend code. This required a custom build environment for the react ecosystem. Bit of a nuisance to develop, very pleasant to work with once completed.