

## Personal

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## Core Competences

Analysis, architecture, design and build (a.o. graphically interactive) software, (meta)modelling, full stack development, Java, scrum, Agile

## Soft Skills

Strong analytical skills, good communication skills, listening, empathy, accurate, switch between teamwork & autonomy, persuasiveness, creative, practical, result oriented, overview, presenting, knowledge sharing

## Career

### 2019 – now: Software developer at Nedap Light Controls

Designing a DSL (Domain Specific Language) for defining user interface and modbus communication for monitoring and managing UV lamps in water treatment plants. Building (based on this DSL) a universal Electron app for different UV lamp driver types. For each driver type the interfaces are described in the DSL. Develop an iOS and Android Luxon Switch app to control the lighting inside and outside buildings from an iPhone or Android phone.

Design and develop an iOS and Android UV app to monitor lamp drivers through Bluetooth from an iPhone or Android phone.

*Use technology & methodology:* TypeScript, Angular, angular-redux, C++, C, modbus, ffi, DSL, CSS, Electron, yaml, npm, Node.js, Bamboo for Continuous Integration (CI), IntelliJ, Visual Studio, scrum, Git, Jira, Confluence, Code Composer Studio, Ionic Cordova (for lighting app), Ionic Capacitor (for UV app), WebStorm, Android Studio, Xcode, Ionic Bluetooth-LE, Ionic QR-scanner

### 2017 – 2019: Java developer and scrum coach at Topicus Healthcare

BK2020 project: Development of the application for the workflow of the Dutch governmental health checks of the RIVM (Dutch National Institute for Public Health and the Environment) in DevOps team. Design & develop graphical editors for parts of it. Architecture of the application landscape and information security in the screening units for the detection of breast cancer. Infrastructure for our SaaS (Software as a Service) solution. Set up AWS cloud environment. Advise on improvement of the internal processes.

Start a DevOps team for a Java application for youth healthcare.

*Use technology & methodology:* Java, React, JSX, JavaScript (ECMAScript), Flow, Bootstrap (met reactstrap), Redux, HTML SVG (Scalable Vector Graphics), REST services, npm, yarn, Docker, Wicket, Hibernate, Spring, PostgreSQL, Jenkins Bamboo for Continuous Integration (CI) and Continuous Delivery (CD) to our acceptance environment, jQuery, Maven, IntelliJ, Jira, scrum, Agile, kanban, AWS CloudFormation, Selenium, Cucumber

### 2018: Architect of a Proof of Concept space time diagram railway material planning

For the railway material planning I've built a Proof of Concept to enable railway planners to plan railway material through drag & drop along the space-time lines of the railway schedule.

*Use technology:* Java, React, JSX, JavaScript (ECMAScript), Flow, Bootstrap (met reactstrap), Redux, HTML SVG (Scalable Vector Graphics), REST services, npm, Yarn, Hibernate, Spring Boot, PostgreSQL, Maven, IntelliJ

### 2013 – 2017: Java developer and scrum master at the Dutch Railways

Architecture and development of a GIS (geographical information system) which shows (based on data from drawings of engineering companies for the railway infrastructure) a railway deployment, with the train traffic planned on these railways. Simulate this train traffic in the course of time. Initiative, scrum master and development for transforming the train material planning process from character based to graphically interactive.

*Used technology & methodology:* Java, GEF (Graphical Editing Framework), Draw2D, Eclipse RCP (Rich Client Platform), MyBatis, Oracle, IBM Jazz, Requisite Pro, scrum, Agile, Cucumber, TDD (Test Driven Development), Specification by Example, JUnit, Twist, EasyMock, Guice, Toad, ant, SharePoint, LDAP, Cucumber, Jenkins, Git, Jira, Gradle

**2012 – now: Teacher Functional Design with UML at Vijfhart IT Education**

Teach courses Functional Design with UML. In these courses the students apply the learned techniques on software which their employer wants to have made.

**2015 – now: Architect of research project Amoixa**

Amoixa will be a SaaS (Software as a Service) RAD (Rapid Application Development) tool, enabling users to draw online a class diagram, activity diagrams, etc. Based on these amoixa immediately creates a working web application, which the users can adapt through drag and drop.

*Used technology:* Kotlin, Spring Boot, PostgreSQL, REST services, html, JSON, IntelliJ, HTML SVG, Github.

*Formerly (in research phase) used technology:* React, Redux, Java, JEE, MySQL, JavaScript, HTML canvas, AngularJS, Angular, Scala, XML, Eclipse

**2016: Workshop AngularJS met CiviCRM**

With several CiviCRM developers workshop to build a user interface in AngularJS on top of CiviRules.

*Used technology:* AngularJS, JavaScript, CiviRules framework, HTML, Eclipse

**2014: Trainer Domain Specific Languages at ING bank Arnhem department Branches**

Design and build meta models. Build diagram editors (= graphical DSLs) for modeling software components.

*Used technology:* EMF (Eclipse Modeling Framework), Emfatic (textual ecore editor with annotations for graphical syntax), Eugenia (GMF generator), GMF (Graphical Modeling Framework)

**2014 - now: Author for Boom uitgevers / BIM Media / Academic Service**

Write the book "Aan de slag met Scrum". This book describes scrum theory and many examples of the usage of scrum in my work as a software architect.

**2012 – 2013: Author voor Pearson Education**

Write the book "Inleiding UML". Target audience of this book is everyone who is involved in designing software: from future users who tell what they want to do with the software, up to analysts and programmers. These people need a common language to communicate with each other. This book describes this language, the Unified Modeling Language (UML)

**2011 – 2013: Designer & C# .NET developer innovation department in Motiv of the RDC (RAI Data Center)**

Extensions of SaaS-solution OBS.

Migration of carfocus for all Dutch Peugeot dealers to OBS.

Redesign and rebuild of ROB-Net (a SaaS solution) for the ROB association. Members of this association are most Dutch car lease companies and automotive companies.

Perform the role of product owner for the system for electronic invoicing for ROB-Net.

Transition to SEPA (IBAN and BIC) for ROB-Net and electronic invoicing.

*Used technology & methodology:* SQL Server, C# .NET, ASP.NET, Visual Studio, Professional, SQL Server Management Studio, html, LLBLGen, autofac, MassTransit, RabbitMQ, SignalR, Gherkin, SpecFlow, scrum

**2010 – 2011: Scrum master and architect debit control module Essent**

Analysis, architecture and realization of a debit control module and datawarehouse for trading gas and electricity through the Powerhouse web application.

Further, as scrum master, I guided the scrum team which implemented this module.

The object relational mapping is done through code generation from the domain model through Xtext. The workflow engine does runtime interpretatie of the domain model.

*Used technology & methodology:* Oracle, Ibatis, Java, Spring, GWT (Google Web Toolkit), JSF (Java Server Faces), html, Xtext, PL/SQL, scrum

**2009 – 2014: Research project ESRAD (Event Sourced Rapid Application Development)**

Research to possible architectures for the application of event sourcing on both meta levels (application model and end user data) of RAD (Rapid Application Development) tools. The application model consists of UML models, a CRUD matrix and (also adaptable by the end user) web GUI screens.

*Used technology & methodology:* GWT (Google Web Toolkit), UML (Unified Modeling Language), html and Google App Engine (in earlier versions also Xtext, Xpand, iBATIS and Oracle)

**2008 – 2017: Teacher Analysis & Design with UML and scrum, and graduate consultant at the Hogeschool van Amsterdam**

In my lessons students learned and exercised making a functional design with UML models. These were based on business requirements from their daily work. Their work was structured using scrum, so that they got scrum experience as well. Further I was consultant for students during their graduation.

*Taught methodology & used technology:* UML (Unified Modeling Language), BPMN (Business Process Modeling Notation), scrum, SharePoint

**2009 – 2010: Software architect at Mendix**

Design and implement functionality in the Mendix model driven web application development suite.

Functionality in the modeler I wrote in C#.NET (among other a 2D graphical modeler for screen flow diagrams), and in the runtime environment in Java.

For maintaining the meta model I wrote a modeling language in Xtext. From this I generated, through Xpand, C# code for in the modeler, and Java code for in the runtime environment. This automatically synchronizes the code of the modeler and the runtime with each other.

Further I integrated this development environment with SAP through IDocs and BAPIs.

*Used technology:* C#, .NET, Java, Xtext, Xpand, Webservices, JCo (Java Connector van SAP), IDocs (Intermediate Documents of SAP), BAPIs (Business APIs van SAP), JSON (JavaScript Object Notation), Mendix platform

**2007 – 2008: Solution architect at Atos Origin**

Establish model driven development factory. Educate business analysts and requirement engineers to use this factory.

Goal of this factory is to be able to generate quickly a first version of a business application for different technologies. I've focused on developing the language in which the model is defined, and the ability to generate custom made Java applications from such a model. This model consisted of UML diagrams.

In the first version we used the graphical UML diagram editor RSM. In a later version I developed for this, because of the limitations of RSM, a graphical editor based on Eclipse and GEF. In both versions we generated code from the EMF models that were created through the graphical editors.

*Used technology:* MDSD (Model Driven Software Development), DSLs (Domain Specific Languages), Meta Modeling, Java, openArchitectureWare (Xtext en Xpand), RSM (Rational Software Modeler), Enterprise Architect (of SparxSystems), Eclipse, EMF (Eclipse Modeling Framework), GEF (Graphical Editing Framework), Draw2D, JPA (Java Persistence API), html, J2EE, JSF, Spring, JavaScript, JBoss, Webservices, ActionScript (Adobe Flash, Adobe Flex)

**2008: information analyst / business analyst at Bureau Jeugdzorg**

Analyzing needs and possibilities for computerization for the client registration system and indication management system.

**2007 – 2008: project architect at Ministry of Justice and National Police Services**

Analyses, architecture and realization of an application which enables the collection of information through the internet, analyzing and processing this information on intranet and in datawarehouse.

*Used technology & methodology:* Java, openArchitectureWare (Xtext en Xpand), Rational Software Modeler, Eclipse, JPA, J2EE, JavaScript, JBoss

**1999 – 2007: Software architect at Compuware****2007: Project architect at the Agis health care insurance company**

Analysing the business requirements and establish the architecture for a new declaration processing system.

*Used technology:* OptimalJ, Java, Vektis (standard for information exchange in health insurance), html

**2000-2007: Architecture and development of OptimalJ**

OptimalJ is an MDA based Java EE development environment built in Java on Eclipse: from a domain model an applicatiemodel is generated, and from there J2EE application code, both incrementally.

With the architecture edition users can define their own meta models and transformations, which gives them full control over the generated applications.

I have among others built an incremental layout engine for the graphical diagram editor of the domain model, so that in manually drawn diagrams the layout is improved automatically.

*Used technology:* MDA (Model Driven Architecture), Meta Modeling, Java, Eclipse, NetBeans, J2EE, Hibernate, MOF (Meta Object Facility), XMI (XML Metadata Interchange), XML (eXtensible Markup

Language), html

**1999-2000: Architecture and development of the workflow system of Uniface**

Using Uniface (a 4GL) we've built a workflow system, which we integrated with Uniface, to sell it with Uniface as Uniface Flow.

*Used technology:* Uniface, Proc (programmeertaal van Uniface), C++, Java

**1994 – 1999: Technical manager and software architect at Cimax International B.V.**

DComp is a graphical business process modelling tool, used by business consultants.

I built the graphical editor of DComp in C, first as a plugin for Spinnaker Plus, later it became part of our standalone C++ application. When more developers joined Cimax, it also became my task to manage them and to design the DComp extensions that we built.

*Used technology:* C, C++, MFC (Microsoft Foundation Classes) and Visual Studio.

**1993 – 1994, 2004 – 2010 (simultaneously with several employments):**

Research for the web application framework App4G (Applications for Google Web Toolkit).

Consultancy for outsourcing the development of a webapplication for the Emergo foundation.

Consultancy for the creation of a multi-year budgetting system for real estate.

Design and develop report generator for motivational patterns.

Investigation for the development of 3D CAD software.

Quality check of specialized CAD software for Apple MacIntosh.

*Used technology:* Symantec C++, THINK Pascal, Perl, html, Visual Basic for Applications

**1992 – 1993: AB3D (own company)**

Custom-made education, training and support in computer use and exact sciences.

**1990 – 1992: Staff in Hospital Gooi-Noord**

Designing and implementing new business processes due to a merger of three hospitals.

**1987 – 1989: Working student at Infill Systems B.V.**

System administration, CAD-drawing and development of administrative software.

*Used technology:* HyperCard, HyperTalk

## Education

**2019, 2021: Presentations & workshops Quantum Computing** in Brussels, Deventer and Reeuwijk

**1983 – 1990: Delft University of Technology, mechanical engineering**

specialized in software development, M.Sc. at section design sciences / CAD on 3D-modelling and integration of these models in business processes.

*Used technology:* Pascal, Medusa, Delfi 2+

**1977 – 1983: Montessori Lyceum Rotterdam, gymnasium beta**

## Human languages

**Dutch** (native)

**English** (fluent in speech and writing)

**German** (reasonable in speech, moderate in writing)

**French** (moderate in speech and writing)

## Hobby projects

**1980 – 1983:** Op een DAI personal computer ontwerpen en bouwen van een Pacman variant (DAInibble) in 8080 Assembler, en diverse andere computergames in Basic.

*Used technology:* 8080 Assembler, Basic

## Private life

Enjoy nature outside, hobby farm, organic food, raising a family