

# C.V. Martijn Schrage



## Personalia

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GitHub: [github.com/Oblosys](https://github.com/Oblosys)  
Date of birth: 4 June 1973  
Nationality: Dutch

## Education

1999 - 2004 Utrecht University, Software Technology group: PhD Computer Science  
1991 - 1997 Utrecht University: MsC Computer Science (Cum laude)  
1996 Utrecht University: Propedeutical degree Psychology  
1994 University of Wisconsin - Madison: exchange student (Fulbright grant)  
1986 - 1991 Niels Stensen College, Utrecht: VWO (grade average: 8.0)

## Programming languages / frameworks

JavaScript/TypeScript (React/Redux, Node.js, Express, Jest/Enzyme, JQuery, Lodash, D3, Angular), Haskell, MongoDB, MySQL, Git, SVN, Datadog, Docker, AWS, Ansible, GitLab CI, Travis, CircleCI, Java (Eclipse), C#

## Key Skills and Strengths

- Design and implementation of complex software
- Quickly picking up new languages and technologies
- Design of dynamic user-friendly interfaces
- Scientific research
- Teaching

## Languages

- Dutch (native language)
- English (fluent)

## Professional experience (freelance)

Jul 2018 - present **LeasePlan Digital: [www.leaseplan.com](http://www.leaseplan.com)** (TypeScript, React/Redux, GitLab CI, Datadog)  
Senior front-end developer / Solution architect  

- Team lead front-end code quality & refactoring
- Design/implementation of largely automated release/hotfix workflow for global multiple-team front-end project, featuring detailed Slack notifications for non-technical staff
- Front-end Datadog instrumentation, client/server logging, & production status dashboards
- Helping other teams with TypeScript, React, & git questions
- Conducting technical interviews

May 2018 **Open source (1100+ GitHub stars): [react-lifecycle-visualizer](https://github.com/martijnmshrage/react-lifecycle-visualizer)** (JavaScript, React/Redux)  
Npm package with a [StackBlitz playground](https://github.com/martijnmshrage/stackblitz-playground) for visualizing React lifecycle methods  

- Chosen as tool of the year 2018 by the [React Status blog](https://react.status.blog)
- Featured on Mybridge's [amazing React open-source tools of 2019](https://mybridge.com/blog/amazing-react-open-source-tools-of-2019)
- Nr. 5 in this list of [22 miraculous tools for React developers in 2019](https://mybridge.com/blog/22-miraculous-tools-for-react-developers-in-2019)

Jan 2018 - Feb 2018 **Veranderkracht: [www.interimreview.nl](http://www.interimreview.nl)** (React/Redux, TypeScript, Webpack)  
Complete rewrite of JavaScript Angular front-end to TypeScript React/Redux

Jul 2017 - Sep 2017 **DelphiCloud forecasting website** (JavaScript, React/Redux, Webpack, D3, Docker)  
Front-end development consultancy  

- Normalization of redux store, fixing animations, refactoring & debugging
- Git consultancy & improvements to repository setup
- Improvements to Docker deployment process

May 2017 **Website [oblomov.com](http://oblomov.com)** (TypeScript, React, Webpack, Docker)  
Server-rendered responsive single-page React app, TypeScript client & server

Nov 2016 - Mar 2016 **DelphiCloud forecasting website** (JavaScript, React/Redux, Webpack, D3)  
Front-end development consultancy  

- Design/implementation of responsive React D3 components for visualizing probability distributions
- Design/implementation of user-friendly React team-management component
- Setup of Redux infrastructure and conversion of several pages to Redux
- Setup of incremental Webpack build environment & Nightwatch test suite
- Cleanup/debugging/reduction of legacy CSS/JavaScript codebase

Jun 2016 - Dec 2016 **Omnity search engine** (Haskell, AWS (EC2, S3), Ansible, CircleCI, PostgreSQL)  
Document-ingestion backend written in Haskell using CloudHaskell Erlang-style concurrency  

- Design/implementation of log-structured persistency for large corpus data structures on S3
- Debugging & low-level optimization of concurrent multi-hour ingest runs on 100+ EC2 cores with multi-terabyte inputs and multi-gigabyte log files
- Setup of Ansible automation for running document ingest on AWS
- Implementation of TF/IDF reference tests and setup/maintenance of CircleCI test suite

Dec 2015 - Apr 2016 **Veranderkracht: [www.interimreview.nl](http://www.interimreview.nl)** (Angular, TypeScript/JavaScript, MongoDB, Grunt)  
Design & implementation of review site for interim professionals  

- MEAN stack, single-page responsive Bootstrap client
- Autonomous account creation with email validation
- Bluebird promises, Shared code between client and server

Sep 2014 - Apr 2015 **Netherlands Food and Consumer Product Safety Authority (NVWA)**  
DTV project: new time-tracking database (Haskell, Angular, JavaScript, Git)  

- Modifications and improvements to the Ampersand compiler for generating database model
- Migration from Subversion to Git + Git instruction to other team members

Apr 2014 - May 2015 **RuG + several companies: Cercando project** (TypeScript, JavaScript, Node.js, D3, Java)  
Design and implementation of system for tracking visitors of the Rotterdam Museum of Natural History in real time using RFID antennas, and visualization of visitor movement  

- Design & implementation of entire system, including incremental trilateration algorithm
- Low-level communication with RFID hardware, Web server, Client web app

Dec 2013 - Mar 2014 **Pics on Air Ltd.: ShotVibe** (Objective C, Java)  
Photo-sharing app (available in App Store)  

- Lead iOS developer

Oct 2013 - Dec 2013 **Rijksuniversiteit Groningen / Drents Museum: MuseumPlus** (JavaScript, Node.js, D3)  
Visualization tool for tracking museum visitors  

- Web application for visualizing movement of museum visitors
- Derivation of visitor positions from RFID sensor data through trilateration

Sep 2012 - Feb 2013 **Private project (WBSO): WebViews** (Haskell, JavaScript)  
Framework for dynamic web-applications generated from abstract specifications  

- Incremental web server
- Combination of server-side and client-side computations
- Examples built: advertising site for borrowing items, restaurant reservation app
- Part research

May 2012 - Jul 2012 **Open source projects Haskell community** (Java, Haskell)  

- EclipseFP: IDE for Haskell in Eclipse
- NipTuck: code formatter for EclipseFP

- Sep 2011 - Apr 2012 **Dutch Council for the Judiciary: project Koppelvlak** (Haskell, JavaScript, PHP, SQL)  
 Scientific programmer: worked on Ampersand compiler, which generates a functional specification and prototype web application from an algebraic specification
- Development/improvement of generator for functional specifications and prototypes
  - Extensions to Ampersand specification language
  - Web front-end for MySQL database
- Dec 2010 - May 2011 **iPhone app: hiRise** (Objective C)  
 Augmented-reality app for measuring the height of buildings (available in App Store)
- Filters for stabilizing gyroscope and other sensors
  - Developed augmented-reality algorithms from scratch
- Nov 2010 **Central Veterinary Institute: project Piglet 2.0** (JavaScript, Haskell)
- Implementation of multiple-language interface for data-input web application
- Aug 2009 - Aug 2010 **Utrecht University: project ALIVE** (Java, Eclipse)  
 Model-driven framework for design and analysis of agent-based organization models
- Debugging and integration of several existing Java/Eclipse tools
  - Design/implementation several graphical editors using GMF method
  - Built advanced editor for logical expressions with in-place error messages
- May 2009 - Jul 2009 **Central Veterinary Institute: project Piglet 2.0** (JavaScript, Haskell)  
 Web-interface for data input swine-flu project
- User friendly because meant to be used by vets
- Jan 2009 - Feb 2010 **NLnet foundation: project Proxima 2.0** (Haskell, JavaScript)  
 Follow-up project to PhD research, subsidized by NLnet foundation.
- Development of web-interface for generic WYSIWYG structure editor Proxima
  - Incremental graphical renderer
  - Developed techniques for handling network latency en low band width
  - Also WBSO grant

## Professional experience (other)

- 2004 - 2009 **Utrecht University: Scientific programmer** (Haskell, C#)  
 Decision Support Systems group
- Development/maintenance of Bayesian-network toolkit Dazzle
  - Graph editor/probabilistic algorithms/user interaction
  - Moderately large project: 10,000 lines of Haskell (comparable to 200,000 lines of Java)
  - Pocket PC application for data input by vets
  - Part research
- 2004 - 2006 **Utrecht University: Assistant professor Software Technology group**
- Courses: Functional Programming, Grammars and Parsing, Editing Structured Documents & XML, Software Architecture, Programming Environments
  - Supervision of several master's students and one PhD student
  - Research/development of Proxima editor (Haskell)
  - Presentations, incl. Invited speaker, PSD Workshop 2005, University of Tokyo, Japan
- 1999 - 2004 **Utrecht University: PhD**  
 Design of the generic WYSIWYG structure editor Proxima
- Requirements analysis, Formal specification of architecture, Abstractions for editing/user interaction, Prototype implementation (Haskell)
- 1997 - 1999 **Utrecht University: Scientific programmer, Software Technology group**
- Design/implementation content-management system for educational materials (Java)