

Dipl.-Wirt.-Inf.

./ MARTIN DONATH . CV

FULL-STACK ENGINEER

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./ TL;DR

10+ years of experience in software development

Applying modern methodologies for a holistic approach

Experience with system programming, distributed systems, real-time processing, embedded databases, web applications, huge datasets, natural language processing, information retrieval, devops, statistics, visualization, user experience design, responsive web design, working in 500+ server environments

Polyglot software developer

A language is a tool, not a solution

Fluent in C/C++, Erlang/OTP, Ruby, Node.js, JavaScript, PHP, Shell, HTML5 and CSS; some experience with Go, Perl, Julia, Java, Lua, R

Worked in multiple industries

Broad domain knowledge

Finance/FinTech, E-Commerce, Online Communities, Pharmacy, Travel, Cruises, Public Relations, Music

Languages

International mindset

German.....native tongue
English.....business fluent
French.....basic
Spanish.....basic

Open source activist

Community thinker

Active open source developer – maintainer of multiple open source projects written in C/C++, Erlang, Ruby, JavaScript and SASS

./ PROJECTS / CLIENTS

2017

Costa Digital / AIDA Cruises – Consulting and Development (Freelancer)

Development of the MyAIDA App for onboard booking and communication

Support for all onboard chat-related topics, e.g. integration of Push Notifications (APNS/FCM), development of several custom plugins for MongooseIM, increasing maintainability of the chat's code base by restructuring the build pipeline, development of integration tests and service mocks, solving connectivity issues

Applied technologies: Erlang/OTP, XMPP, Ejabberd, MongooseIM, MongoosePush, JavaScript, ES6, React Native, GraphQL, Docker

2017

Solvians GmbH – Consulting and Development (Freelancer)

Technology provider for the financial industry with focus on web technologies

Migration of the embedded database system, the web application and data handling layer that were developed for the VOOLA platform into self-contained Docker images/containers, performance-tuning on the embedded database system to handle 200k quotations/updates per second, optimization of the runtime configuration for maximum flexibility, technical support for deployment and networking-related issues

Applied technologies: C/C++, Erlang/OTP, Ruby on Rails, Node.js, JavaScript, ES6, Docker, MySQL, ElasticSearch, Memcached, LevelDB, ZeroMQ, Protocol Buffers, Autotools, Valgrind

2017

App Arena GmbH – Consulting (Freelancer)

A young Online-Marketing company developing Facebook Apps

Design of a distributed pub-sub system based on Amazon Lambda and Serverless to augment arbitrary events with additional data from a multitude of sources, i.e. geo-tagging, anonymizing and categorizing events related to website analytics, definition of work packages for an efficient implementation through near-shoring

Applied technologies: AWS, Amazon Lambda, Amazon Internet of Things, Serverless, Redis, ElasticSearch, JavaScript, ES6

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2016 – 2017

Shop Apotheke – Consulting and Development (Freelancer)

One of the largest pharmacy online shops in Europe, on behalf of RedTecLab GmbH

Integration of a SaaS solution for the website-wide search functionality as a drop-in replacement for the current solution, atomic design from the ground up with automated screenshot testing, test-driven development, and continuous integration using BrowserStack and Jenkins, implementation of a Varnish-based local development proxy using Docker, all frontend components with no-script fallbacks and a low-level abstraction layer for the SaaS solution to prevent vendor lock-in, definition of a cutting edge development process

Applied technologies: Node.js, Express, JavaScript, ES6, Debian Linux, Docker, Ansible, Varnish, Gulp, BrowserSync, BrowserStack, Gemini, Mocha, Babel, Webpack, HTML5, SASS, Jenkins, Jira, Atomic Design, Patternlab,

2016

Hypo Landesbank Vorarlberg – Consulting and Development (Freelancer)

A mid-sized Austrian bank with consumer focus, on behalf of Sevenval GmbH

Technical project coordination, requirements engineering for a TYPO3-based system, migration and adaptation of all custom extensions, rewrite of several custom extensions, implementation of a custom-tailored complex approval process with deep integration into the CMS, technical concept and implementation of the full-responsive frontend using mobile first paradigms, transition to atomic design principles, responsive images, implementation in a way that the interface works entirely without JavaScript using progressive enhancement, workshops on how to use the newly implemented functionality on the client's site

Applied Technologies: TYPO3, ExtBase, PHP, JavaScript, MySQL, Vagrant, Gulp, BrowserSync, Gemini, Mocha, HTML5, SASS, Jira, Atomic Design, Patternlab

2016

Icebreaker GmbH – Web Development (Freelancer)

A full-service agency based in Cologne

Implementation and design of a landing page for a German real estate fund, modernization of a WordPress template for a well known EU-level politician

Applied Technologies: JavaScript, WordPress, Gulp, HTML5, SASS

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2013 – 2016

VOOLA GmbH – CTO (Co-Founder, acquired by Solvians GmbH in 2016)

A FinTech startup building a search engine for financial instruments

Design and implementation of an embedded database system to handle 200k quotations/updates per second with realtime search capabilities, development of an automata-based natural language processing engine to extract meaning from unstructured search queries, integration and normalization of various legacy data formats into a unified Protocol Buffers-based format, development of unit tests and deployment of continuous integration practices, user experience design, definition and design of the whole corporate identity including logo, business cards, typography and colour schemes

Applied Technologies: C/C++, Erlang/OTP, Ruby on Rails, Node.js, JavaScript, MySQL, Elastic-Search, Memcached, Redis, LevelDB, ZeroMQ, Protocol Buffers, Autotools, Valgrind, Debian Linux, nginx, Graphite, Gulp, HTML5, SASS, Bourbon, Susy

2013 – 2016

DIE PR-BERATER GmbH – Consulting, Development and Operations (Freelancer)

A full-service agency with clients like BMBF, NRW.INVEST, Stadt Köln and GIZ

Technical project coordination and quality assurance for the NRW.INVEST website relaunch, design and development of a web-based solution for trade fair visitor management, system operations and infrastructure management, general user experience design and responsive web design for a multitude of clients and branches

Applied Technologies: Node.js, Express, JavaScript, Ruby, PHP, MySQL, TYPO3, Symfony, Silex, Debian Linux, nginx, Graphite, Postfix, Dovecot, Gulp, HTML5, SASS, Bourbon, Susy

2011 – 2012

Thebing Software GmbH – Consulting (Freelancer)

Integrated management solution for language travel agencies and schools

Qualitative and quantitative analysis of existing software project management methodologies, introduction support for agile methodologies, deep analysis of the company's codebase, derivation of metrics and recommendations for action, prolonged support for the implementation of the recommended actions, technical support for continuous integration

Applied Technologies: PHP, Jenkins, phpUnderControl, Debian Linux, Vagrant

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2007 – 2011

wer-kennt-wen.de GmbH – Software Architecture (Freelancer)

A German online social network with 10 million registered users

Migration to a scalable and highly distributed architecture, introduction of a MVC-based application architecture, development and implementation of a lightweight and backend-independent ORM layer, workshops for the company-wide deployment and usage of the ORM layer, development of database-related fully transparent partitioning-, access- and persistency mechanisms for a 500+ server farm, implementation of a distributed and partitioned list data structure, test-driven development methodologies, identification and optimization of performance-critical code regions, data mining and statistical analysis of user-generated data, visualization of user-generated data for exploration

Applied Technologies: PHP, Zend Framework, Node.js, JavaScript, MySQL, Memcached, Sphinx, Debian Linux, Apache, HTML, CSS

2006 – 2007

plan-i GmbH – Web Development (Freelancer)

Integrated web-based solutions for SMEs

Development and implementation of specialized web-based order management systems and online shops for various branches, design and development of a web-based solution for trade fair planning and organization for Koelnmesse

Applied Technologies: PHP, JavaScript, MySQL, Apache, HTML, CSS

2005 – 2006

plan-i GmbH – Web Development (Internship)

Integrated web-based solutions for SMEs

Ongoing development of a proprietary content management system solution, implementation of websites on the basis of the proprietary solution

Applied Technologies: PHP, JavaScript, MySQL, Apache, HTML, CSS

./ PROJECTS / OPEN SOURCE

2016 – 2017

<https://github.com/squidfunk/mkdocs-material>

[A Material Design theme for MkDocs](#)

Material is a theme for MkDocs, an excellent static site generator geared towards project documentation. It is built using Google's Material Design guidelines, fully responsive, optimized for touch and pointer devices as well as all sorts of screen sizes. At the time of writing it's the most popular third-party theme for MkDocs on GitHub.

Applied technologies: Node.js, JavaScript, ES6, Docker, Alpine Linux, Python, Travis CI, SauceLabs, Selenium, Gemini, Gulp, Babel, Flow, Webpack, HTML5, SASS, Shell

2013 – 2016

<https://github.com/squidfunk/protobluff>

[A modular Protocol Buffers implementation for C](#)

protobluff is a modern, super lightweight and modular implementation of Google Protocol Buffers for the C language, a data exchange format developed at Google and open sourced in 2008. It is far more compact than JSON and XML and eases interoperability in distributed polyglot (multi-language) environments.

Applied Technologies: C/C++, Protocol Buffers, Autotools, Valgrind, Travis CI

2012 – 2014

<https://github.com/squidfunk/generic-linked-in-driver>

[A generic non-blocking linked-in driver for interfacing Erlang and C](#)

An efficient implementation of a generic linked-in driver for communication between Erlang/OTP and C/C++ programs, designed from the ground up to support multi-threaded, non-blocking operations, the ability to hold state across calls and customizability which minimizes the need to write boilerplate code.

Applied Technologies: Erlang/OTP, C/C++, Rebar, Valgrind

This list is only an excerpt of the open source projects I'm maintaining. See

<https://github.com/squidfunk> for a full list.

./ EDUCATION

2006 – 2011

University of Cologne (Cologne, Germany)

[Dipl.-Wirt.-Inf. in Information Systems \(1.7\)](#)

Specialization: Information Management, Supply Chain Management

Thesis: Predicting Rejection In Online Social Networks (1.0)

1995 – 2005

Gymnasium Fränkische Schweiz (Ebermannstadt, Germany)

[Abitur ~ A-Levels](#)

./ PUBLICATIONS

2014

Using Weighted Interaction Metrics for Link Prediction in a Large Online Social Network
[Socioinformatics – The Social Impact of Interactions between Humans and IT](#)

Posegga, O., Fischbach, K., & Donath, M. (2014). Using Weighted Interaction Metrics for Link Prediction in a Large Online Social Network. In K. Zweig, W. Neuser, V. Pipek, M. Rohde, & I. Scholtes, Socioinformatics – The Social Impact of Interactions between Humans and IT (pp. 63–79). Cham: Springer International Publishing. doi:10.1007/978-3-319-09378-9_5

2013

Using Users' Activity Metrics for Link-Prediction in a Large Online Social Network
[Proceedings of the INFORMATIK 2013, Koblenz, Germany](#)

Posegga, O., Donath, M., & Fischbach, K. (2013). Using Users' Activity Metrics for Link-Prediction in a Large Online Social Network. Proceedings of the INFORMATIK 2013, Koblenz, Germany (LNI, Vol. 220, pp. 1175–1176).

2013

Rejection in Online Social Networks
[Presented at the XXXIII Sunbelt Social Networks Conference](#)

Posegga, O., Donath, M., Fischbach, K., & Putzke, J. (2013). Rejection in Online Social Networks. Presented at the XXXIII Sunbelt Social Networks Conference of the International Network for Social Network Analysis (INSNA), 21-26 May 2013, Hamburg.

./ VOLUNTARY WORK

2016 – today

Mentoring and Coaching

Supporting the startup scene

Working as a mentor and coach for startup-related events like Google Launchpad with e.on:agile accelerator and the Startup Weekend Cologne, passing on my experiences in bootstrapping and running a startup from the business- and technology-perspective.

2004 – 2011

Stadtgruen

An Ambient/Techno netlabel

Stadtgruen, which was founded by Axel Bergk and Martin Donath in 2004, was an international artist collective and record label entirely operating on the Internet which offered Ambient and Techno music for free download – a so called **netlabel**. Among other netlabels that existed at the time, Stadtgruen was one of the most critically acclaimed, as it offered very high and consistent quality throughout all of its releases. In total, there were 50 artists from all over the world, including nations like Germany, Switzerland, Austria, Denmark, Argentina, Slovakia, Latvia, Sweden, the UK and the USA, contributing to a total of 45 releases. The music from Stadtgruen was downloaded 2 million times.

The most important tasks were artist acquisition and management, booking management, general marketing and advertising, mastering (finishing touches on the artists' productions) and coordination among several volunteers from various nations who helped out on development and marketing, as well as web- and print-design.

./ MISCELLANEOUS

What I do when I'm not coding

Random things I'm interested in that you can ask me about

Electronic music production, playing/performing live, photography (= the zen of traveling), generative art, web- and print-design, tech-blogging, disassembling and repairing iPhones and MacBooks, race cycling, running, diving, gardening and cooking with chili peppers, traveling and green tea