



MARKUS GRITSCH

Senior Software Engineer & Architect

Name: **Markus Gritsch**

Birthday: **17th April, 1983**

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Life philosophy

"I want to make things easier instead of harder"

Summary

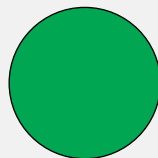
A full-stack polyglot software developer with over ten years of experience architecting, implementing, and leading software solutions spanning across the web, mobile, and desktop environments. He has an untameable talent for learning and testing new technologies and practices developing solutions methods, and tackling challenging problems while delivering superior code and product quality. He is an agile and programmatic thinker who utilizes and enforces best practices and metrics, is comfortable choosing the best tool for every job, and refines and adopts new processes given by the product's needs. He is a highly knowledgeable and experienced hard-worker, especially when utilizing open source technology within a software project. A leader by nature, he is a substantial addition to any development team that shares his mentality, stack, and traits. He appreciates a strong and complementary team in which everyone can develop their full potential and stand by the other when things don't go as planned to find a solution together. His life's dream is to develop an application that gets used on every digital device in the world.

Lessons Learned

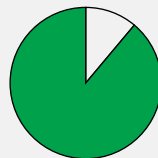
Adopted Technologies

Abandoned Technologies

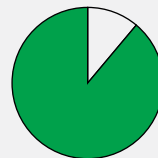
Profile



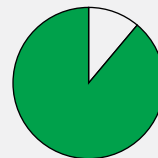
ANALYTICAL
ENGINEERING



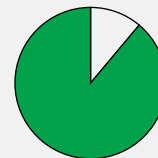
PROTOTYPING /
CLEAN CODE



DISTRIBUTED
SYSTEMS



STORY-TELLING



TEAMWORK

Competencies Evo.

FE - Typescript, React + feat. l. Hooks, Recoil, Nextjs, Material, Styled-C, MDX, Remark, Framer
BE - Java, Graal, Maven, OSGi, Neo4j, GraphQL, OpenAPI, Python
CI - Github Actions / Docker
AI - Tensorflow

FE - Typescript, React + feat. l. Hooks, Redux, Reselect, Jest, BS, Webpack, Node, Puppeteer
BE - Java, Maven, CDI, Rest, JUnit, Mongo, Math engines
Dev Ops / CI - Gitlab / Docker
IDE - Code, IntelliJ, Webstorm

Work Experience

2020 ▶

Focus on my software projects and technologies I wanted to learn, for about 12 months started in May 2020

Experiments: Telling a story about a problem of high abstraction using visual animations to synthesize environmental characteristics and related properties.

POC: OSGi v7 and 8, OSGi in Docker, OSGi with Graal / Native Image, Neo4j in OSGi.

OSS: Contribution in various OSS projects e.g. Millipede (large Nextjs app), JClouds, ...

Babysteps: ML frameworks and OpenAPI. **Focal Point:** Fn programming.

2018 ▶

Software Engineer & Architect (Full Stack, long term > 30 month)
Münchener Hypothekbank, Munich

Lighthouse project to enable digital transformation in real estate finance

Web-based application that reflects the entire loan origination process.

Real-time calculation pipeline to determine crucial figures fully autonomous.

Transform slow work routines into smart, decision-supported collaborative workflows.

Boost onboarding experience of new users through reactive cross-app interactions.

FE - Redux, Polymer, Grunt, Gulp, Webpack, Babel, Enzyme, NPM, APM, Electron, Webstrom
BE - Aries, Karaf, GraphQL, OGM (Object to Graph), Vert.x, Docker / Kitematik

2014 ►

Founder, Lead Software Engineer & Architect

MILLIPEDE, REGENSBURG

Assistant technologies to enable self-determination in the digital world

Desktop-based application (Electron) based on web- and native technologies.

API for third-party utilization (REST, Vert.x and GraphQL)

Automated (Standalone / Docker) local/remote backend deployment (Cloud Sync)

FE - JavaScript, ES5/6, Node, Angular, CoffeeScript, Flux, React (JSX), Browser-Ext.
BE - Spring, Spring-Social, SQL, JPA, Hibernate, NoSQL, Neo4J, Vert.X, REST(Restlet, JAX-RS), Vert.X, JClouds, IntelliJ, GIT

2012 ►

Software Engineer

MILLIPEDE, OBERSCHNEIDING

PRIVACY ENHANCING TECHNOLOGY

Cloud synchronization application with a focus on security and abstraction of storage.

Distributed communication and coordination middleware. Native FS Integration.

Social context and storage aggregator for 13 Social-Media and 12 Cloud Platforms.

Browser Ext. to embed a secure sharing context into an arbitrary digital environment.

FE - RIA - Flex, ActionScript, PureMVC, Robotlegs, Air
BE - JAVA, OSGi, Felix, Equinox, (Restlet, JAX-RS), RPC, Maven, Ant, JUNIT, SVN, Eclipse STS
Distributed Architectures
P2P, DHT (Kademlia)

2010 ►

Software Engineer

Azureus - Open Source Project

Task: Research and development to improve P2P applications

Goal: Improve P2P-based (BitTorrent) data transfer model with client/server models

Requirements: P2P Protocol Modification, Modularization, Modern User interface (RIA)

Challenge: Refactor large/complex applications to share a modularization concept

Reference: github.com/gurkerl83/millipede

Development-Stack

MATLAB, Qt,
C/ C++

2006 ►

Software Engineer

KRONES, NEUTRAUBLING

Task: Development of a real-time image/pattern recognition from scratch

Goal: Improve labeling equipment to avoid cutting marks on the badge of PET bottles

Challenge: Recognition rate which corresponds to reality - 8 m/s - 50K badges/h

Education

- 2005 ► **University of Applied Science (Regensburg)**
Computer Science
Focal areas of focus: Distributed networks and computer systems

References

OSS Contribution / Github

project-millipede, gurkerl83

Company / Mission

millipede.me

React-Native in the queue

Page 12 - Evolve the prototype
towards the mobile ecosystem

React demonstrator in Action

Page 19 / Screenshot - Early
prototype after react adoption

Publications

- 2017 ► **Personal Intrusion Detection and Prevention (PID/P)**
Technical description (Volume = 130 pages)
English version - Reference: <http://millipede.me/docs/german/PID-P.pdf>
German version - Reference: <http://millipede.me/docs/english/PID-P.pdf>
- 2016 ► **Application Instrumentation (AI)**
Technical specification (Volume = 40 pages)
◀ Reference: <http://millipede.me/docs/english/DNI/DNI-Support-Documents.pdf>
- 2015 ► **Project Millipede**
Technical description / specification (Volume = 300+ pages)
Reference: <http://millipede.me/docs/german/PM-Beschreibung-WIP.pdf>
- 2014 ► **Privacy Enhancing Technology (PET)**
Technical description / specification (Volume = 40 pages)
◀ Reference: <http://millipede.me/docs/english/PET.pdf>

Enabled through

My free and unbind mindset defies me to continuously explore new technology and adopt novel approaches at a very early stage. The goal is to challenge best practice to obtain the momentum of innovation.

See publications

The abstract nature of certain prob. makes a solution very complex.

Other Competencies

Distributed Network Protocols, Edge Computing Architectures, IT-Security, Access Control, Cryptographic / Trust Systems, Reverse-Engineering computer programs

Illustrator

Hobbies

Soccer since the age of ten, Travel, Hike, Winter Sports, and programming when its cold outside.

Engineering approach



Analysis

Detailed analysis and decomposition of complex situations to identify the origin of a problem.



Assessment

Assessment of the identified reason by relevant points of view.



Communication

Refinement and visualization of the underlying nature of a problem and the procedure for a straightforward and conflict-free understanding.



Solution



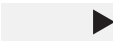
Planning and implementation of measures which work best for a sustainable and efficient mitigation of the cause.

Languages



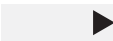
German

Native Speaker
Skilled technical and creative writer.



English

Excellent command / highly proficient in spoken and written English
Skilled technical writer.



Language of the visual expression

“A picture is worth a thousand words”
Experience: Advanced (4+ years)

Social responsibility

2016



Board member of the sponsoring association of my local soccer club

Arranging several social events throughout the year to generate sufficient funds to promote young people's participation.