# Matthias Loeks

Agile Fullstack Engineer | Continuous Improvement Coach | Geospatial Enthusiast

Experienced software engineer in Java, JavaScript, and Python.
Passionate about maps—I have been working many years with geospatial data and GIS.
I put a high focus on clean code and a collaborative team culture.
Testing expert and strong communicator, I’m able to coach teams and organisations.

[LinkedIn](http://www.linkedin.com/in/matthias-loeks-5027ba22) | [GitHub](https://github.com/mloeks) | [spicy.downturn.rainfall](https://w3w.co/spicy.downturn.rainfall) | hello@mloeks.com | +49 152 23897493

Fluent in English and German.

## Work Experience

### **Senior Software Engineer** @ [BASF Digital Farming GmbH](https://xarvio.com/), Cologne, DE December 2021 – December 2024

*Tech Stack: Java 17, Spring Boot, JUnit 5, AssertJ, Mockito; PostgreSQL, PostGIS, Geoserver, GeoTools, JTS, JAI, QGIS; RESTful API Design, GraphQL, RabbitMQ; Clean Code; Docker, CI/CD, TeamCity, AWS, Kubernetes, ELK, Datadog, SRE*

* Leading the Java development of geospatial components in the backend team of [xarvio™ “Field Manager“](https://fm.xarvio.com/).
* Geospatial data management, analysis & visualisation in a highly scaled, cloud-based application.
* Geospatial product ownership and product management advocate, stakeholder management.
* Coaching the team for a better dev experience, system monitoring, incident management and agile practices.

### Product Owner @ [REWE digital GmbH](https://www.rewe-digital.com/de), Cologne, DE April 2019 – November 2021

*(Tech) Stack: Product Visions, Value Proposition, Agile Roadmapping, User Tests, Impact & Story Mapping, Continuous Delivery, Impact validation, Stakeholder management, Product Backlog management, Design Thinking*

* Ownership of the *market offers* domain and the backend-heavy platform for the [REWE.de website](https://www.rewe.de/angebote)
* Servant leader of a highly cross-functional Scrum team, driving inspiration and innovation within workshops.
* Supported architectural design across teams. Prioritisation of business needs and translation into IT requirements.

**Fullstack Software Engineer** @ [REWE digital GmbH](https://www.rewe-digital.com/de), Cologne, DE November 2015 – March 2019

*Tech Stack: Java 8, Groovy, Spring Boot, Spock, TDD; JavaScript, ES6, React, HTML5, CSS3, Sass, Webpack, Jasmine, Jest, Thymeleaf; PostgreSQL, PostGIS, Nominatim, RESTful API Design, Apache Kafka; Clean Code, XP, Pair & Mob Programming, trunk-based dev; Docker, CI/CD, Jenkins, Google Cloud Platform, ELK, Prometheus, Grafana, SRE; OAuth, Keycloak; UX Research, User Testing*

* Crafted µServices for REWE’s delivery service in a quality-focused Scrum team, working by XP practices.
* Supported the transformation of the shop monolith to µServices.
* Introduced an OSM-based address geocoding for the REWE online shop.

### **Fullstack Software Engineer / GIS Expert** @ Heidelberg mobil GmbH, Heidelberg, DE August 2012 – October 2015

(now [Flowcate GmbH](https://flowcate.com/))

*Tech Stack: Python, Groovy, Grails, Bash; JavaScript, jQuery, AngularJS (1.x), OpenLayers, Leaflet, HTML5, CSS3, Less; PostgreSQL, PostGIS, PL/pgSQL, pgRouting, OSRM, GraphHopper; Jenkins; GeoServer, GeoWebCache, Nominatim, Shapely, GDAL, GRASS GIS, QGIS, PyQGIS, PyQt*

* Created custom maps & routing graphs for trade fair (web) apps and workflows to automate that.
* Wrote software for automated incorporation of wildly heterogeneous geodata and their filtering & simplification.
* Consultant for a truck routing solution based on OpenStreetMap and open-source routing engines.

### **Research Assistant / PhD student** @ [Ruprecht-Karls University](https://www.geog.uni-heidelberg.de/gis/index_en.html), Heidelberg, DE August 2011 – July 2012

In the geoinformatics research group (Institute of Geography).

*Tech Stack: Java, Java 3D; JavaScript, OpenLayers, Nominatim, OpenStreetMap; PostgreSQL, PostGIS; Scientific Research, Scientific Writing, University Teaching*

* Conducted research on utilising volunteered geographic information for 3D city models, like (partly 3D) OSM data.
* Typical research stuff like writing papers, giving conference talks and teaching GIS courses.

### **Intern** @ [Swiss National Park](https://nationalpark.ch/en/research/), Zernez, CH May 2011 – July 2011

National park GIS department.

*Tech Stack: Java, Swing; PostgreSQL & PostGIS; QGIS, ArcGIS*

* Conducted research on the spatio-temporal behaviour of park visitors. Assistive GIS tasks using the ESRI suite.

## Education

### [Gottfried Wilhelm Leibniz University](https://www.fbg.uni-hannover.de/de/studium/studienangebot-der-fakultaet/geodaesie-und-geoinformatik), Hannover, DE October 2005 – September 2010[City University](https://www.city.ac.uk/research/centres/gicentre), London, UK

*Tech Stack: Java, Swing, Java 3D, C++, Qt, JavaScript, PHP; PostgreSQL & PostGIS; Matlab, R; QGIS, ArcGIS*

Master of Science in Geodesy and Geoinformatics.
Graduated in both B.Sc. and M.Sc. with distinction.

## Beyond Work

* *Family:* In fact the only hobby you can realistically have, being a father of two kids aged 4 and 1! Spending time with my dearest... if time allows I like to bake and cook. Gardening keeps me sane and clears my mind.
* *Music:* Raised in a musical family, listening to and making music means a great deal to me. I'm a tenor singer in a “pub choir” and play the guitar in an informal Jazz duo (currently on hiatus).
* *Sports:* I did a lot of running before the kids came, managed to finish two half-marathons below 1h30m. Nowadays running more casually, or taking my gravel bike to explore the woody hills around our home.