Matthias Loeks

Fullstack & Geospatial Engineer | Continuous Improvement Coach

Experienced Product Engineer with a high focus on customer value and team collaboration.
Agentic AI first – I help to make AI actually work in your teams.
Passionate about maps – strong track record in geospatial data and GIS.
Agile leader and strong communicator, I'm able to coach teams and organisations.

LinkedIn | GitHub | spicy.downturn.rainfall | hello@mloeks.com | +49 152 23897493
Fluent in English and German.

Work Experience

Geospatial Data Engineer / Technical Account Manager @ Envu GmbH — Mar 2026 – Nov 2026
Langenfeld, DE (Remote)

Tech Stack: Agentic AI (Claude Code), Context & Loop Engineering; Python, FastAPI, Shapely, Geopandas; PostgreSQL, PostGIS; RESTful APIs; Docker, Github Actions; Git, Bash; Geospatial Data Analysis, QGIS; Technical project management, Key account management

- Supporting the Smart Weed Spraying season of 2026 with geospatial expertise, data engineering and automation
- Geospatial quality assessment of large amounts of produced data from spraying trains
- Leveraged Agentic AI to gain insights on large amounts of data and automating QA & delivery
- Responsible for timely data delivery, documentation and all relevant technical communication towards the key client

Senior Fullstack & Geospatial Engineer @ DB Systel GmbH, Frankfurt, DE (Hybrid) — Nov 2025 – Dec 2026

Tech Stack: Java 24, Spring Boot, JUnit 5; PostgreSQL, PostGIS; TypeScript, Angular, MQTT, Vitest, OpenLayers, turf.js, QGIS; Maven; RESTful APIs; DevOps, Docker, Gitlab CI, Helm, Kubernetes, SRE; Agentic AI (Claude Code, Pi, Kiro CLI); IntelliJ, Git, Bash.

- Leading full-stack engineer of geospatial components in the domain of traveller info (disruption communication)
- Implementation and optimisation of routing solutions on the railway network of Deutsche Bahn
- Visualisation of „disruption maps" within both internal as well as traveller-facing DB applications
- Improvement of team collaboration, coaching in agile methods, sparring partner for PO and Agile Coach

Senior Software Engineer @ ServiceNow / Raytion GmbH, Düsseldorf, DE (Hybrid) — Jan 2025 – Nov 2025

Tech Stack: Java 21, Spring (Boot, Security), JUnit 5, AssertJ, Mockito, Testcontainers; PostgreSQL, jOOQ; Gradle; RESTful APIs, Drupal & Atlassian APIs; DevSecOps, Docker, Jenkins, Artifactory, SonarQube, Gitlab; Agentic AI (Claude Code); IntelliJ, Git.

- Upgrading Java libraries and Spring Boot applications to most recent versions within the field of enterprise search, with a focus on security and CVE mitigation.
- Supporting the feature development in connecting different source systems (e.g. Microsoft Sharepoint, Drupal, Confluence, and more) with different search engines (e.g. Google Cloud Search, Apache Solr, ServiceNow AI Search)
- Helping a newly formed team of five developers becoming efficient fast, and coaching in Agile and lean practices

Senior Backend & Geospatial Engineer @ BASF Digital Farming GmbH, Cologne, DE — Dec 2021 – Dec 2024

Tech Stack: Java 17, Spring (Boot, Data, Batch, Web), JUnit 5, AssertJ, Mockito, TDD; PostgreSQL, JPA/Hibernate, PostGIS, Geoserver, GeoTools, JTS, JAI, QGIS; RESTful API Design, GraphQL, RabbitMQ; Clean Code; DevSecOps, Docker, CI/CD, TeamCity, SonarQube; AWS, Kubernetes, Monitoring & Alerting, SRE (ELK, Datadog); Technical Product Ownership, Stakeholder management; IntelliJ, Git.

- Leading the Java development of geospatial components in the backend team of xarvio™ "Field Manager".
- 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, Cologne, DE — Apr 2019 – Nov 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
- 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, Cologne, DE Nov 2015 – Mar 2019

Tech Stack: Java 8, Groovy, Spring (Boot, Data, Batch, Security, Web), Spock, TDD; JavaScript, ES6, React, HTML5, CSS3, Sass, Webpack, Jasmine, Jest, Thymeleaf; PostgreSQL, PostGIS, Nominatim, OSM; RESTful API Design, Apache Kafka; Clean Code, DDD, XP, Pair & Mob Programming, trunk-based dev; DevSecOps, Docker, CI/CD, Jenkins, GCP, Kubernetes; Monitoring & Alerting, SRE (Micrometer, ELK, Prometheus, Grafana); OAuth, Keycloak; UX Research, User Testing; ITSM; IntelliJ, Git, Bash.

- 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.

Geospatial Data Engineer / GIS Expert @ Heidelberg mobil GmbH, Walldorf, DE Aug 2012 – Oct 2015
(now Flowcate GmbH)

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; IntelliJ, Git, SVN.

- 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, Heidelberg, DE Aug 2011 – Jul 2012
In the geoinformatics research group (Institute of Geography).

Tech Stack: Java, Java 3D; JavaScript, OpenLayers, Nominatim, OSM; PostgreSQL, PostGIS; Scientific research, Teaching courses

- 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.

Education

Gottfried Wilhelm Leibniz University, Hannover, DE Oct 2005 – Sep 2010
City University, 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 6 and 3! 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.