Dr. Marc Lange

Mathematics
Analytics
Data Science

✉ Hamburg, Deutschland

☎ LinkedIn, Ask for my Signal

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About me

As a PhD in mathematics, I enjoy models doing complex calculations. In Business Intelligence and Data Science others mostly see the results in form of KPIs.

Typical examples are: Good targeting for marketing, product comparisons from different suppliers, good predictions, whether customers will buy or soon cancel a subscription.

Specifically I enjoy my work most, if it enables people to have well informed discussions and decisions with an "aha!" moment.

Skills

Mathematik, Geometrie, Topologie

Python, (Postgre*My)SQL

pandas, sklearn, requests

Linux, bash, zsh, curl, cron

Analytik, Tracking

Automatische Empfehlungssysteme

Mobile Marketing

Docker, Docker Compose

Dashboards, Selenium, Scraping

Trenchbroom, Godot, Blender

Academia

2011 - 2015	PhD in Mathematics (Dr. rer. nat.)	Universität Hamburg, Hamburg

Multiplicative Structures And Involutions On Algebraic K–Theory

2005 - 2011	Diploma Mathematics	Universität Hamburg, Hamburg

(Minor in Computer Science)

Talks, I enjoyed giving

2021 Back to Basics – Topology of Simplicial Complexes for Business Optimisations, IMSI TDA 2021

2020 Topological Data Analysis for Data Scientists, *Data Science Meetup, (Google), Hamburg*

My Business Stations

2023 - Freelance Data Science
App-User Clusters, scraping lead lists, matching users

2023 Business Intelligence Manager   ClaraVital, Hamburg

- Classification of shop articles for expected storage time. (SQL Server)
- Extraction of address lists for postcard mailing campaigns. (SQL, python)

2019 - 2022 Data Science Consultant   elbformat, Hamburg

- Migration of an aged intranet corpus of articles: 60.000 articles with only 6.000 still relevant to users, which resulted in a substantial reduction of needed work and simplification for user search. (Python, SQL, Matomo tracking, scraping)
- A very lean chat bot for a school app to help pupils with reading trouble. The bot helps the teachers administrate the reading class with the app.
- Education of 3 junior Data scientists (python, SQL, sklearn, pandas, numpy, Tableau)

2016 - 2019 Business Intelligence Analyst / Lead   AppLike GmbH, Hamburg

- Automatic business reporting for the whole team in the morning (node.js, google sheets, integration of various partner APIs) for a daily overview of cost and revenue as feedback to our activity.
- Tech-Support for all tracking URLs in marketing and sales (HTTP, REST, querystring magic), so business partners as well as colleagues could measure the effectiveness of campaigns accurately.
- Ad hoc analyses, "Impact Plots" for business teams (python, jupyter, sql, google sheets, APIs) to have individual success/failure factors in just one easy image.
- Good and robust Revenue / LTV production reducing costs and enabling planning (APIs, sklearn, python, SQL). As a result the marketing campaigns were running with 40% margin share (before: 20%) with immediate revenue increase.
- Conducted the interviews and onboarding for Junior BI Analysts (google sheets, python, sql).
- Advised a master thesis which built bots to test our apps (python, functional analysis, machine learning, algorithmics).

.. and now?

I've done quite a bit to interest people in products. I'd like to do more to understand users enough so they also like to stay. There's a lot of business use still to be gained from classic methods like recommendation engines, e.g. by increasing the problem dimension strategically.

But if someone were to contract and feedback me as a junior game level designer, who likes to automate stuff, I'd be very curious, too :D