

KATRIN MROTZECK

Lisbon, Portugal / Remote • +351 926 148 023 • katrin.mrotzeck@gmail.com • [Github](#) • [Kaggle](#) • [Linkedin](#)

PROFESSIONAL SUMMARY

Multilingual Data Analyst & Product | Biomedical Engineering Background English- and German-speaking professional based in Lisbon, with 4+ years in HealthTech development. Leveraging a strong foundation in **R (Tidyverse, ggplot2)**, **SQL** and **Python**, I transform complex datasets into strategic insights - most recently demonstrated by an end-to-end analysis of consumer health behavior (Bellabeat Case Study). I combine technical data modeling with a Product Manager's mindset to drive measurable outcomes and data-driven decision-making.

CORE STRENGTHS

Analytical Problem-Solving | Actionable Data Insights | Strategic Stakeholder Management | Visual Communication & UX Design | Global Business Acumen | Iterative Thinking

TECHNICAL SKILLS

Data Analytics: R (Tidyverse, ggplot2, dplyr, lubridate), Python (Pandas, Matplotlib), SQL, C++

Data Visualization & Reporting: ggplot2, R Markdown, MS Excel, Google Sheets.

Product & Project Management: Jira, Confluence, Miro, Figma (UI/UX Review), Slack.

TECHNICAL PROJECTS

Bellabeat Data Analytics Case Study | Tools: R (Tidyverse, ggplot2, dplyr, lubridate), Kaggle ([Link to Kaggle Notebook](#))

- **Conducted an end-to-end analysis** of Fitbit consumer behaviours and health data to identify growth opportunities for women-focused health-tech products.
- **Utilized R and dplyr** to clean and merge complex datasets, identifying a 73% "Nighttime Gap" in user sleep tracking engagement.
- **Developed professional visualizations** with ggplot2 to translate behavioral patterns into actionable marketing recommendations.
- **Proposed data-driven strategies** to improve device auto-detection, aiming to double user data retention.

PROFESSIONAL EXPERIENCE

Independent Entrepreneur | Product Development & Market Exploration Jan 2025 - present

- Managing end-to-end business operations, from initial product concept and branding (Figma) to market launch.
- Utilizing customer feedback and market observation to iterate on product design and improve user engagement.

Product Manager | PLUX – Wireless Biosignals, S.A. Jan 2023 - Jan 2025

- **Data-Driven Optimization:** Analyzed user interaction data to redesign the mobile app onboarding flow, reducing time-to-data acquisition significantly across alpha and beta testing phases.
- **Exploratory Data Analysis (EDA):** Leveraged customer usage patterns to identify friction points, resulting in new feature prioritizations on the product roadmap.
- **Cross-Functional Strategy:** Acted as the data liaison between R&D and end-users, translating complex biosignal data requirements into clear technical specifications and user value.

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EDUCATION

Master of Science in Biomedical Engineering

Sept 2017 - Sept 2020

Technical University of Applied Sciences Lübeck

- **Core Focus:** Advanced Signal Analysis
- **Technical Application:** Leveraged Python for complex signal processing, feature extraction, and algorithm development.
- **Master's Thesis:** "Development of an Assistive Communication Device for ALS Patients" - Engineered a real-time signal processing pipeline to detect and classify muscle activity triggers.

Bachelor of Science in Biomedical Engineering

March 2012 - Aug 2017

Hamburg University of Applied Sciences

PROFESSIONAL EXPERIENCE CONTINUED

Product Expert | PLUX – Wireless Biosignals, S.A.

Nov 2020 - Jan 2023

- **Technical Project Advising:** Conducted biosignal data feature extraction and analysis for research partners using Python, ensuring high data integrity for clinical and educational studies.
- **Quantitative Research:** Developed, executed, and analyzed "Voice of the Customer" (VoC) surveys, transforming raw feedback into statistical summaries for stakeholders.
- **Process Improvement:** Created knowledge base articles, reducing recurring support tickets significantly through data-informed content creation.
- **Academic Mentorship:** Supervised 5+ student projects and Master's theses, providing technical guidance on data collection and experimental protocols.

Internship Research Software Engineer | PLUX – Wireless Biosignals, S.A.

Sept 2019 - Nov 2020

- Developed Python/C++ algorithms for real-time biosignal feature extraction (ECG, EMG) for ALS patient communication tools.
- Executed user-centered data acquisition and experimental setups using wearable sensors.

Internship | PLUX – Wireless Biosignals, S.A.

Feb 2019 - May 2019

- Processed physiological data (EEG, fNIRS) using Python and created technical tutorials for customer knowledge bases.

EARLY CAREER & INTERNSHIPS

Working student R&D | Olympus Surgical Technologies Europe

Oct 2017 - Jan 2018

- Supported laboratory testing and experimental protocol documentation for R&D projects.

Internship R&D | Olympus Surgical Technologies Europe

Sept 2016 - Sept 2017

- Conducted medical device development experiments and completed Bachelor's thesis.

Working student QM & Regulatory Affairs | Waldemar Link GmbH & Co. KG

May 2015 - May 2016

CERTIFICATES

Google Data Analytics Professional Certificate ([Link to Certificate](#))

LANGUAGES

German - Native | English - Professional | Portuguese - Beginner

INTERESTS

Nature | Hiking | Surfing | Yoga | Beachvolleyball | Gardening | Cooking | Skating