

Kasper Renhorn Berg

📍 Mannheim, Germany

☎ (+46) 70 642 6306 | ✉ kasper.renhornberg@gmail.com | 📱 krenbergs | 💻 kasper-renhorn-berg



Recently graduated full-stack software engineer specializing in Python (FastAPI) and TypeScript (React). Highly motivated by a sustainable energy future and eager to contribute to greenfield applications. Proven ability to ship clean, well-tested code (TDD) and manage agile workflows across the stack, from PostgreSQL to DevOps (GCP/Docker/CI/CD). Ready to grow into responsibilities related to data science and advanced observability.

Education

Bachelor of Science in Computer Science

Malmö, Sweden

MALMÖ UNIVERSITY

Sep. 2022 - Jun. 2025

- Focused on backend software development with Java, including design patterns, REST API design, database technology, concurrent programming, algorithms and data structures.
- Pursued self-chosen studies in machine learning.

Studies in AI & Machine Learning

Karlskrona, Sweden

BLEKINGE INSTITUTE OF TECHNOLOGY

Sep. 2020 - Jun. 2022

- Focused on programming with Python, mathematics, algorithms and artificial intelligence.

Work Experience

Bachelor's Thesis

Malmö, Sweden

SARSYS ASFT

Jan. 2025 - Jun. 2025

- Developed a hybrid LSTM-XGBoost model to estimate airport runway friction coefficient, reducing prediction error by 2.6% over a standalone XGBoost baseline.
- Engineered a unified 5-year dataset by integrating and preprocessing multi-dimensional data split across MSSQL and MySQL databases.

Full Stack Developer Intern

Malmö, Sweden

RENTALBUDDY

Sep. 2024 - Jan. 2025

- Drove the development of a client-facing dashboard within an agile 5-person team, delivering key milestones 2 months ahead of schedule.
- Engineered a robust backend using Node.js/TypeScript and Test-Driven Development (TDD) to implement 5 core RESTful API endpoints.
- Implemented the main revenue graph in the React frontend, receiving positive stakeholder feedback.

Projects

AI-Enhanced Language Learning Platform

PYTHON, FASTAPI, POSTGRESQL, TYPESCRIPT, EXPO, ZUSTAND, GCP, DOCKER

- Built a Python/FastAPI backend and GraphQL API to manage learning content, utilizing PostgreSQL.
- Designed a mobile application using Expo (React Native), focusing on user friendly designs, with Zustand handling complex state management.
- Designed and deployed a CI/CD pipeline with Github Actions to streamline deployment to GCP (Google Cloud Platform).

Relay Server

Go, SOCKETS

- Engineered a foundational Go-based relay server out of a curiosity to understand real-time server architecture, implementing Protobufs and TCP/IP for an optimized and scalable communication layer.
- Validated robust message routing, successfully handling 1,000 messages per client across 200 lobbies (10 clients/lobby) to ensure accurate and reliable data delivery.

Grocery Financial Insights

PYTHON, SQLITE

- Developed a Python program that empowers consumers to make informed purchasing decisions by analyzing grocery product data from barcodes and calculating key nutritional and price ratios.

Skills

Programming Languages

Python, JavaScript, TypeScript, Go, Java, SQL

Backend Development

FastAPI, Node, Jest, PostgreSQL, GraphQL, Pytest, REST, TCP/IP

Frontend Development

React, React Native (Expo), NextJS, Zustand, HTML, CSS

Tools & Methodologies

Git, Github Actions, Docker, OAuth, Scrum, GCP, Linux

Languages

English (Fluent, C2) • **German** (Beginner, A2) • **Swedish** (Native, C2)