

Caspar Emanuel Fritzen

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EDUCATION

- 2020 - **Technical University of Munich** MSc Technology and Management
2023
- 50 / 50 computer science major and energy markets business specialization
 - Thesis (1.0) dev a full-stack web analytics platform for an ecolabel w/ major German insurer
- 2017 - **Technical University of Munich** BSc Technology and Management
2020
- Project studies on web-development (PHP, SQL, JS, HTML) and databases
 - Completed EIDI (top 10% of class) and PGDP with 2.0 and 2.3 respectively (Java)
 - Thesis on statistical analysis for a startup (algorithms implemented in R / Python)
- 2016 - **Technical University of Munich** Studium Naturale/Generale
2017
- MINT Semester for orientation in the science fields.
- 2015 - **Bundeswehr Gebirgsjäger FWDL** voluntary army service as a Mountaineer in Mittenwald, Germany
2016
- Completed year with the rank "Hauptgefreiter Gebirgsjäger"
- 2013 - **Ellesmere College** International Baccalaureate (IB) in Ellesmere, Shropshire, UK
2015
- Graduated with 35 IB points, top 3 of the year equivalent to 1.9 (German Abitur grade)

PROGRAMMING EXPERTISE

- Sep 2021- **Internship at Playasia in Hong Kong SAR- web / backend development**
Dec 2021
- Implemented, customized, and deployed an email marketing system using PHP and Laravel.
 - Developed a custom library to integrate the system into the Playasia backend.
- Oct 2019- **Project studies at ALFASOLUTIONS in Linz, Austria (three-month fulltime)**
Jan 2020
- Implementation of a web-based accounting system for a client
 - Delivered a fully-fledged internal social and accounting platform
- 2018- **Practical course in the foundations of programming (one semester, java)**
2019
- Developed a Java-based search engine using Google's PageRank algorithm, demonstrating proficiency in algorithms and data structures.

WORK EXPERIENCE

- Mar 2024- **Maintenance Automation Engineering Intern - at Tesla Gigafactory Berlin-Brandenburg**
now
- Streamlined maintenance operations in the paint shop at Tesla GFBB by automating maintenance workflows, programatically updating mechanical and electrical bill of materials and inching internal software systems closer to a factory digital twin.
 - Leveraged a multidisciplinary approach, utilizing AI-driven translations, PLC alarm integrations, and cross-functional collaboration with IT, automation, and engineering teams to enhance system efficiency and reliability.
- Oct 2023- **Software Engineer - at Friedl & Company a TUM spinoff company**
now
- Further refinement and buildout of the thesis project: Full stack development of the web analytics platform for an ecolabel with the biggest German insurer, including Stripe payments integration. Full DevOps and CICD responsibilities
- Feb 2022- **Junior Engineer - at TIDEFI / tidepay- from DEX to RWA tokenization**
Feb 2024
- Developed a sophisticated NodeJS Discord bot for community growth
 - Guided the pivot to tidepay, a RWA tokenisation company and spearheaded AI/LLM efforts

- Nov 2021 **Web-development for Hansons Robotics Hong Kong SAR– SophiaDAO NFT marketplace**
- short-term sprint-based web development sessions to create a website + marketplace for the SophiaDAO intended for the sale of hundreds of NFTs created by the humanoid robot “Sophia”
- 2021-2024 **Software Engineer + technical advisor for loyal – app / web / infrastructure development**
- consultation for cloud architecture, native iOS and Android apps, backend / dashboard for clients (see loyal-app.de for reference) - loyal systems innovation GmbH Hamburg
- Oct 2018 **Internship at Aerius GmbH HVAC systems for marine vessels in Saint Nazaire, France**
- planning and installing of hvac systems in multiple cruise vessels by royal caribbean cruises ltd. at the Saint Nazaire port in France

SKILLS & INTERESTS

language	German – C2, English – C2
tech	Python, JavaScript + TypeScript, NextJS, NodeJS, REST, Django, Docker, SQL, Java, PHP, Laravel, CICD, QA
interest	LLMs, RAG, Agents, DAG, Blockchain, renewable energy, architecture, economics, EVs, energy storage, business development, project management, real-estate
	tennis, mountaineering, mountain-biking, swimming, fitness, skiing, photography