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Profile

Education

BSc Artificial Intelligence and Data student, Technical University of Denmark

September 2023 - current

- **GPA: 11.1 / 12**
- Taking extended courses in **Algorithms** and **Data Structures**
- 6th-place finisher in the *Danish National Championship in AI 2024* under team name *Powered by SmartFridge*

Experience

Mission Control Developer, Danish Student Association for Rocketry

September 2024 - current

- Implementing **unit testing** and **logging** in a large **C# codebase**
- Refactoring old code to follow sensible structure and **design patterns**

Student Assistant, Copenhagen Applied Research A/S

April 2024 - current

- Implementing **Python automation scripts** for data collection and processing

Teaching Assistant, Technical University of Denmark

January 2024 - current

- Teaching 120 students **Python Programming** as Assistant Lecturer
- Teaching **data science** and **machine learning** as Teaching Assistant in Statistics and Intelligent Systems
- Helped convert the Statistics textbook and exercises from **R** to **Python**

Projects

Full-Stack Website (React, TypeScript, CSS, PostgreSQL)

July 2024 - current

- A dynamic self-deployed website to show off my projects
- Integrated **frontend** and **database** with appropriate **code structure**
- Check it out at jonathantybirk.com

Modelling of Membrane Degradation (NumPy, pandas, SciPy, scikit-learn)

March 2024 - May 2024

- Paid contract work to data model for *Aprisium Pte. Ltd.*, a Singapore-based environmental services start-up
- Extensive **code documentation** and **data visualizations (Matplotlib)**

Self-Operating Computer (LangChain, OpenAI API)

February 2024 - May 2024

- Program to visually perceive a computer screen, and navigate using mouse, keyboard, and **GPT-4V** reasoning
- Built with **Python** with robotic process automation start-up *Symbolik.ai*

Technical skills

C# / .NET

Python / PyTorch / LangChain

SQL / PostgreSQL

TypeScript, React, HTML, CSS

Git, Markdown

Google Cloud, AWS

Languages

Danish, native

English, fluent

Spanish, beginner

German, beginner

Additional qualifications

- Chairman of the student council for 250 students at *Gymnastikhøjskolen i Ollerup*. I greatly improved efficiency over previous years by prioritizing the delegation of responsibilities to small task-groups.
- 4-month army enlistment on Bornholm. This taught me to teamwork effectively even under stressful conditions. I am now continuing my training in the Danish Home Guard.
- Experience performing music as guitarist and front singer - this has helped me get over a fear of public speaking.
- Cultural insight from solo-backpacking many times across Europe. I like working with international and diverse groups of people.
- Great joke-teller according to my programming students!

