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Profile

I'm a BSc AI & Data student at DTU who's passionate about building AI-driven solutions that bring real-world impact. My background spans full-stack development (TypeScript, React, Node.js, PostgreSQL) and AI tools (LangChain, OpenAI), including a self-operating computer prototype leveraging GPT-4 for automation. Pebble's mission strongly resonates with me, and I see immense potential in joining an early-stage startup to shape how AI transforms business operations. I thrive in environments where I can iterate rapidly, contribute meaningfully, and learn continuously. I'm excited by the opportunity to deepen my technical expertise while gaining firsthand experience in the entrepreneurial side of scaling a modern, AI-first platform.

Education

BSc Artificial Intelligence and Data student, Technical University of Denmark

September 2023 - current

- **GPA: 11.1 / 12**
- Taking extended courses in **Algorithms** and **Machine Learning**
- 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** in a team
- 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 *Computer Programming* as Assistant Lecturer
- Supervising machine learning projects as TA in *Introduction to Intelligent Systems*
- Helped convert the *Statistics* course 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** through **Node.js** with appropriate **code structure**
- Check it out at jonathantybirk.com

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*

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**)

Technical skills

TypeScript, React, HTML, CSS
C# / .NET
SQL / PostgreSQL
Python / PyTorch / LangChain
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 improved efficiency by delegating responsibilities to small task groups.
- Certified personal trainer, having worked with regular people to promote health through exercise and nutrition without toxic self-criticism.
- Cultural insight from solo-backpacking many times across Europe. I like working with international and diverse groups of people.
- 4-month army enlistment on Bornholm. This taught me to teamwork effectively even under stressful conditions.
- Experience performing music as guitarist and front singer - this has helped me get over a fear of public speaking.
- Great joke-teller according to my programming students!

