Jonathan Tybirk

+45 50 59 22 96
jonathantybirk@gmail.com
2800 Kgs. Lyngby
linkedin.com/in/jonathantybirk ↗
github.com/jonathantybirk ↗
jonathantybirk.com ↗

Profile

I'm a BSc Artificial Intelligence and Data student at DTU with a passion for machine learning, software development, and problem-solving. I have hands-on experience in applied ML (cloud services, HPC) and full-stack development (Python, C#, JavaScript). Teaching is something I love, and I've worked as a Teaching Assistant at DTU four times. At DanSTAR, I develop rocket software and oversee a team of talented engineers as a Board Member.
I thrive on technical challenges, enjoy building innovative solutions, and always seek ways to optimize and improve.

Education

BSc Artificial Intelligence and Data student, Technical University of Denmark
September 2023 - current

- **GPA: 10.6 / 12**
- Relevant course work: **Algorithms**, **Deep Learning**, **Machine Learning Ops**
- 6th-place finisher in the *Danish National AI Championship in AI 2024* under team name *Powered by SmartFridge*

Experience

Mission Control Developer, Danish Student Association for Rocketry
September 2024 - current

- Implemented the **TCP** protocol for real-time communication between rocket flight computer and ground mission control system in a large **C# codebase**
- Redesigned the **logging** system, following appropriate **safe code conventions**

Teaching Assistant, Technical University of Denmark
January 2024 - current

- Taught 120 students *Computer Programming* as Assistant Lecturer
- Supervised students on deep reinforcement learning, convolutional neural networks, and latent text embeddings

Personal Projects

Full-Stack Wiki-Site (~ 40 hours)
November 2024 - current

- A dynamic wiki website for my friend's D&D world
- Integrated **frontend** and **database** through **Node.js**
- React, TypeScript, Tailwind CSS, PostgreSQL

Modelling of Membrane Degradation (~ 20 hours)
March 2024

- Paid contract work to data model for *Aprisium Pte. Ltd.*, a Singapore-based environmental services start-up
- NumPy, pandas, SciPy, scikit-learn

Self-Operating Computer (~ 80 hours)
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*
- LangChain, OpenAI API, Google Cloud, Docker

Technical skills
Python / PyTorch / LangChain
TypeScript, Node.js, HTML, CSS
C# / .NET
SQL / PostgreSQL
MS Azure, Google Cloud
Git, Docker, GitHub Actions

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 and an optimistic outlook through exercise and nutrition.
- 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!