Vojtěch Votruba

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EDUCATION

- **Charles University, Prague**: *B.Sc. in Physics (2022 - Present)*
  - Received a merit scholarship every semester with an average of 1.17.
- **Johannes Kepler Grammar School, Prague**: *High School Diploma (2018 - 2022)*
  - Graduated with a 1 mark in Czech, Mathematics, Physics, and English.

WORK EXPERIENCE

- **ELI Beamlines**: *Paid Internship (6 months, 2024)*:
  - Had developed a simulation in Python that was used for assessing the effects of a high-power laser refracting on a plasma emitting nozzle.
- **Department of Atmospheric Physics, CUNI**: *Paid Internship (6 months, 2023)*
  - Contributed to the Department's daily used numerical Fortran code by implementing a new method to account for subgrid-scale turbulence in atmospheric fluid dynamics simulations.

SKILLS

- **Programming & Tools**: Python (advanced; especially experienced in NumPy, scikit-learn, PyTorch, matplotlib), JavaScript (working vanilla JS knowledge; some experience with npm and frontend frameworks), Git, LaTeX
- **Mathematics/Physics**: Good knowledge of Linear Algebra, Numerical Methods, Real Analysis & the theoretical foundations of Machine Learning. Strong knowledge of Physics, especially in Thermodynamics, Quantum Theory, and Analytical Mechanics. Both were acquired from university studies
- **Languages**: Czech (native), English (C2, CAE certificate), French ($\sim$ B1 level)

PERSONAL PROJECTS

- **Recognition of Dissipative Systems Using ML** [NumPy, PyTorch]: Physics-informed deep neural net using geometrical irreversible thermodynamics to predict the evolution of dissipative systems, e.g. chemical reactions. This project is a part of my undergraduate thesis under Michal Pavelka. [GitHub link]
- **Personal Website** [AstroJS, TailwindCSS]: My personal website [vojtech-votruba.github.io] containing some information about me.
- **Virtual Interactive Tour of GJK** [JavaScript]: Developed with my friends for our high school during the covid lockdown in 2020. [website link]

INTERESTS

- Hiking, camping and recently hitchhiking; Reading and debating
- Board games and video games, especially chess; Occasionally running and bouldering