# Vojtěch Votruba

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#### **EDUCATION**

- Charles University, Prague: B.Sc. in Physics (2022 Present)
  - Consistently awarded merit scholarships each semester.
- Johannes Kepler Grammar School, Prague: High School Diploma (2018 2022)
  - Graduated with honors in Czech, Mathematics, Physics, and English.

#### WORK EXPERIENCE

- ELI Beamlines: Internship (6 months, 2024):
  - Developed Python simulations for laser beam propagation in plasma wakefield acceleration experiments.
- Department of Atmospheric Physics, CUNI: Internship (6 months, 2023)
  - Contributed to the Department's numerical Fortran code by implementing a new method accounting for subgrid-scale turbulence.
- Broadcom Inc.: High School Internship (1 week, 2019)
  - Web app development using Django.

#### **SKILLS**

- Programming & Tools: Python (advanced; good experience in NumPy, scikit-learn, PyTorch, matplotlib), JavaScript (basic level; some experience with npm and frontend frameworks), SQL (working knowledge of standard query operations), Git, LATEX
- Mathematics/Physics: Strong foundation in Linear Algebra, Numerical Methods, and Real Analysis. Wide knowledge of Physics especially in Thermodynamics, and Analytical Mechanics.
- Languages: Czech (native), English (C2, certificate), French (low B1 level)

## 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. [GitHub link]
- Personal Website [AstroJS, TailwindCSS]: My personal website [vojtech-votruba.github.io]

### INTERESTS

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