

Vojtěch Votruba

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✉ vv.votruba@gmail.com
in <https://www.linkedin.com/in/vojtech-votruba/>

☎ +420 [REDACTED]
🔗 <https://github.com/vojtech-votruba>

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):*
 - I developed a simulation in Python that had been 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)*
 - I contributed to the Department's daily used numerical Fortran code by implementing a new method accounting for subgrid-scale turbulence.

SKILLS

- **Programming & Tools:** Python (advanced; especially experienced in NumPy, scikit-learn, PyTorch, matplotlib), JavaScript (basic vanilla JS knowledge; some experience with npm and frontend frameworks), Git, L^AT_EX
- **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 (~ 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