Wentao Cai

Place of birth: China
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EDUCATION

Nothereast University — Shenyang, China
Bachelor's degree in Applied Physics — 2020 – 2024

- Weighted average score: 84.4/100.
- Ranking in major: 25/88.
- Awarded the Third Class Scholarship for Excellent Students at Northeastern University for the 2021-2022 academic year.

ACDEMIC EXPERIENCE

Particles Physics
2023.3-Now

- Gravitational capture of **magnetic monopoles** by primordial black holes in the early universe
- **Parker's bound** on galactic magnetic monopoles

The Mathematical Contest in Modeling 2023
Hornorable Mention — 2023.2

- Introducing **JS divergence** as a distance function from information theory
- Optimizing a Monte Carlo model using a **simulated annealing algorithm**.
- Using a **BP neural network** to predict a time series model. results over time

Northeastern University DAO Lab
2021 – 2022

- Using oneAPI for data analysis on Linux
- Analyzing cosmological data using MCMC (Markov chain Monte Carlo) methods

LANGUAGES

🔤 **English**
CET-4: 510/750

🔤 **Chinese**
Native Speaker

</> **Programming**
Python · Matlab · Linux

AWARDS

2023 **Honorable Mention**
2023 MCM

2022 **Provincial third prize**
2022 MCM, China

2022 **Third-class scholarship**
Sophomore year

2021 **First prize**
Python programming