# Peter Bossev

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## Education

#### Bloomington High School North (BHSN)

Bloomington, IN

GPA: 3.99/4.00, Weighted: 4.38/5.00, Ranking: 3/405

Aug 2022 - Present

- Current Sophomore, skipped 8th grade
- Relevant Completed Coursework: Physics Honors (introductory algebra-based physics), Introduction to Informatics Honors (INFO-I 101 at IU), Computer Repair and Maintenance
- Current Coursework: AP Calculus BC (Calculus II), AP Physics C: Mechanics, AP Physics C: Electricity and Magnetism (introductory calculus-based physics), AP Biology, AP World History: Modern, Chemistry Honors
- Test scores: 1450/1520 on the PSAT 10, 1410/1440 on the PSAT 8/9

#### Extracurriculars

# **BHSN Science Olympiad**

Sep 2022 - Present

- Competed at the state level for the '23 and '24 seasons
- Notable placements: 1st (at Cybersecurity) & 2nd (at WIDI, a communication-based event) at state, 2nd (at Astronomy) & 3rd (at WIDI) at regionals, 12/151 at a national online invitational

### Monroe County High Ability Committee

Nov 2022 - Present

Monroe County Community School Corporation (MCCSC)

- The steering committee of MCCSC's High Ability Identification, Services, and Curriculum
- First student to ever be invited to the committee ( $\sim 25$  members)

BHSN Track and Field

Feb 2024 - Present

**BHSN Wrestling** 

Nov 2023 - Dec 2023

**BHSN Math Club** 

Aug 2022 - Present

**BHSN** Math Team

Mar 2024 - Present

### Awards & Achievements

United States Physics Olympiad (USAPhO) Qualifier, 2024: Qualified through scoring in the top 500 nationally out of  $\sim 6000$  participants

National Honors Society (NHS) member: Inducted for demonstrating scholarship, service, leadership, and character

## **PROJECTS**

#### Homemade Dry Ager

Sep 2022 - Present

- Repurposed wine cooler to maintain ideal conditions (temperature and humidity) for meat drying
- Used off-the-shelf DC-DC Buck converters for powering Peltier coolers, microcontroller logic, and fan power.
- Used off-the-shelf microcontrollers (Arduino and NodeMCU ESP8266) for fully automated control logic and data transfer, with the **DHT22**, a Temperature/Humidity sensor
- Created a web interface to graph and monitor Temperature/Humidity conditions remotely (smartphone, PC, tablet)

#### Warframe Discord Bot

Jan 2022 - Feb 2024

- A Discord bot made with **Discord.js**, written in **Typescript**
- Allowed users to easily use bot commands to query Warframe data using the Google Sheets API
- Used by  $\sim 70$  people over its lifetime, with  $\sim 90000$  queries executed

# • A mobile, utilitarian weather app utilizing Flutter

Dec 2022

- Featured an hourly, daily, and weekly forecast with toggle-able graphs, current weather metrics, such as temperature, dew point, snow/rainfall, wind metrics, etc
- Utilized Open-Meteo's weather APIs for getting weather info, and geocoding

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Dec 2023 - Present

• A portfolio website made with 11ty and TailwindCSS

## SKILLS & INTERESTS

zWeather

Programming: Linux, Git, Arduino, Typescript (NodeJS), Flutter/Dart, LaTeX, Python, HTML/CSS.

Languages: English (native), Japanese (Elementary), Chinese (Elementary)

Typing speed: 110 WPM

Interests: Engineering, Physics, Research, Computer Science

Familiar with electronic testing equipment (oscilloscopes, multi-meters, function generators, etc.)