

# Jonathan Zavialov

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## EDUCATION

### **Pennsylvania State University**

2022 – Present

Pursuing B.S. Degree in Computer Science (2026), minors in Mathematics and Engineering Leadership Development

- Current GPA of 3.6, Dean's List

## PROFESSIONAL EXPERIENCE

### **Magna-Power Electronics** – Software Engineer Intern

2023 – 2025

- Developed a PySide GUI for controlling and monitoring power conditioning products, building modular Python components to automate device configuration, improving technician productivity.
- Designed a critical stockroom management application with a FastAPI backend and Qt-based scanner frontend; implemented fault-tolerant API-database communication with an ERP system and automated CI/CD pipelines.

### **Penn State Daily Collegian** – Business Insights Director

2023 – Present

- Designed, developed, and deployed a responsive React-based analytics platform, collaborating with editors and stakeholders, implementing efficient data structures to manage application state and API data.
- Leveraged Python scripts and AI-driven sentiment analysis on reader feedback and engagement metrics to identify high-impact improvements, informing prioritization and design of new features.

### **Central Bucks School District** – Technology Assistant

2019 – 2021

- Assisted with the troubleshooting, installation, and updating of school software.
- Handled the preparation of the school's technology for the upcoming school year.

## EXTRACURRICULAR ACTIVITIES

### **PSU Advanced Vehicle Team, SAE AutoDrive Challenge** – Vehicle Test & Simulation Engineer

2025 – 2026

- Designed and validated autonomous driving routines by developing simulation frameworks, performing scenario-based testing, and analyzing algorithm performance metrics.
- Architected comprehensive test tracks and validation environments by modeling realistic urban layouts, generating edge-case scenarios, and coordinating physical/digital transitions.

### **University Park Undergraduate Association (UPUA)** – At Large Representative

2023 – 2024

- Represented the undergraduate student body by drafting impactful legislation promoting community, equity, and inclusion, as well as contributing valuable insights to Justice & Equity and Academic Affairs committees.
- Engaged with a diverse set of on-campus organizations, effectively representing their interests and fostering collaborative efforts for the enhancement of campus initiatives.
- Cast votes in support of initiatives aligned with my core values, contributing to the advancement of key principles.

## LEADERSHIP EXPERIENCE

### **Blockchain@PSU** – President

2022 – 2023

- Defined club objectives and deliverables for the year, executed events, meetings, and engagement strategies.
- Guided the outreach team to create a newsletter and streamline communication with club members.
- Fostered collaboration with industry professionals to organize networking opportunities for club members.

### **Penn State Math LA Program** – Math 140 (Calculus 1) Teaching Assistant

2022 – 2024

- Developed, implemented, and conducted study sessions to improve student performance on exams.
- Led weekly problem-solving workshops, diagnosing conceptual gaps and facilitating targeted interventions.
- Collaborated with faculty to create supplementary materials, providing additional resources for student success.

## PERSONAL PROJECTS

### **Portfolio Website** – jonzav.me

- Developed a responsive, user-centric portfolio interface, showcasing past projects and skills.
- Built a Node.js and Express backend API supporting real-time RESTful data services; implemented robust error handling and maintained code integrity with Git, improving overall system reliability.

### **Personal Project** – Locatia

- Developed a web application using React for the front-end and Firebase for the backend, including user authentication through multiple open authorization providers and databases.
- Implemented cloud storage functionality using Firebase Storage to efficiently store and retrieve user data and media.