

# Brayden L. Pettigrew

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## EDUCATION

### The Pennsylvania State University

*Bachelor of Science in Computer Science*

**GPA:** 3.89

May 2025

*University Park, PA*

**Relevant Courses:** Object Oriented Programming, Discrete Mathematics, Computer Organization and Design, Intro to Systems Programming, Programming Language Concepts, Data Structures and Algorithms, Operating Systems

## WORK EXPERIENCE

### Cropsmarts

*Research Assistant*

April 2024 – Present

*University Park, PA*

- Contributed to the development of both mobile and web applications enabling farmers to input and interpret data effectively.
- Enhanced application by integrating a feature facilitating efficient input of large datasets in a user-friendly manner.
- Iterated on mobile design by using feedback provided by team members to enhance the user experience.

### Wild Ginger III

*Server/Host*

September 2018 – August 2024

*New Hope, PA*

- Multitasked effectively by managing several customers in a fast-paced environment, creating a seamless dining experience.
- Collaborated productively with other restaurant staff, leading to a high level of service and guest satisfaction.
- Spearheaded the training of new staff.

## PROJECTS

### Food Vision Mini

July 2024 – August 2024

- Engineered and fine-tuned an EfficientNetB2 feature extractor model for food classification with PyTorch.
- Achieved a high prediction accuracy of 96.88% through thorough training, validating, and testing the model.
- Visualized model performance and results using Matplotlib, creating informative plots to analyze accuracy and loss.

### Bella Vita Mobile App

May 2024 – July 2024

- Developed a group-based social media app using React Native, JavaScript, and Firebase.
- Implemented core social media features, including posting, liking, and commenting, creating an engaging user experience.
- Integrated Firebase Realtime Database, Cloud Storage, and Firestore for efficient data management and real-time updates.
- Received positive feedback from users who enjoyed the app's functionality and ease of use.

### Multi-threaded Communication Channel Project

February 2024 – March 2024

- Developed a multi-threaded communication channel library in C, enabling inter-thread communication.
- Utilized mutexes and condition variables for thread synchronization, ensuring thread safety.

### Memory Management Project

January 2024 – February 2024

- Implemented a custom memory management system in C, including memory allocation, reallocation, and free functionalities.
- Enhanced performance and organization with an embedded segregated linked list structure and footer optimizations.

### Mini CPU

October 2023 – November 2023

- Implemented a foundational data path architecture using Verilog, integrating pipelining for concurrent instruction execution.

## EXTRACURRICULARS

### Google Developers Student Club

*The Pennsylvania State University*

August 2023 – December 2023

*University Park, PA*

- Participated in a community dedicated to exploring various software and building solutions in a learning environment.

### Head Risk Manager

*Sigma Chi Fraternity*

August 2022 – December 2022

*State College, PA*

- Organized a team to oversee the safety and execution of fraternity events, effectively reducing potential issues and danger.

## EXTRAS

**Skills:** Python, SQL, C, Verilog, JavaScript, TypeScript, HTML, CSS, Git, React, React Native, Firebase, PyTorch

**Certifications:** React Native via Udemy, PyTorch via Udemy