# Bronson Ianno

## Links

**GitHub:** [bxi23](https://github.com/bxi23)

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### Education

The Pennsylvania State University – University Park

BS Computer Science 2023

GPA 3.86 Cum Laude

Minor in Computer Engineering

Minor in Mathematics

### Activities:

PSU Robotics Club 2019- 2021

HackPSU Organizer 2022- 2023

### Skills:

Python, Java, JavaScript, TypeScript, C, C++, SQL, HTML, CSS, MATLAB, C#

Frameworks:   
AWS Cloud, React, React Native, Django, .Net WPF, Asp.Net, Flask, Node.js, .Net 9

### Tools:

Figma, SolidWorks, Multisim, Postman, Insomnia

### Coursework:

Wireless Comms and Security

Linux System Programming

Circuits and Devices

Computer Vision

### Certifications:

AWS Cloud Practitioner

Meta Back-End Developer

Meta Front-End Developer

## **Volunteer Experience:**

Work Experience:

Automation Engineer @ IA Motion Products| Murrysville, PA| Jan 2024 - Present

* Design and develop automation solutions based on customer requirements.
* Work with the development of software for motors and PLCs.
* Manage distribution of automation products.

Software Engineering Intern @ Carnegie Robotics| Pittsburgh, PA| Jan 2022–Aug 2022

* Assisted in design, development, and testing of robotics software applications
* Wrote OpenCV scripts in Python to assess camera systems for QR code reading
* Implemented feature enhancements to Robot Camera Payload system codebase

## Volunteer Experience:

Hackathon Organizer @ HackPSU | Penn State University | 2022- 2023

* Developed and managed communications for HackPSU Hackathon
* Collaborated HackPSU leaders to raise $5000 from sponsors.
* Develop Hackathon prompts and score contestant solutions.

Team Member @ PSU Robotics Club| Penn State University | 2019-2021

* Attend educational and speaker events led by Robotics Team
* Competed in Arduino robotics competitions within club.

## Projects:

**Full Stack Fitness App** ***(Expo, .NET 9, MySQL, AWS, BLE IMU)***| Personal Study – Project

A connected fitness app featuring real-time sensor streaming, user-generated content, responsive cross-platform UI, and social interaction. Built with an **Expo** front-end and a .**NET 9** (**ASP.NET Core**) back-end using **MySQL**, with planned deployment to **AWS**.

* **App Development | Key Contributions**
  + Developed a cross-platform mobile app using **React Native + TypeScript** in **Expo**, with adaptive UI powered by **Tamagui** and responsive sizing techniques.
  + Designed a modular **JWT authentication system** supporting secure, stateless API interactions.
  + Engineered a scalable **state management architecture** using layered React Contexts for local/global control across tabs and components.
  + Integrated **.NET 9 RESTful API** with secure CRUD operations and persistent user data via **MySQL**.
  + Used **Axios, React Query, and RxJS** to enable efficient data fetching, live updates, and backend syncing.
  + Implemented dynamic, form-driven content using **Formik** and **Yup** with **modal**-based interaction patterns for seamless user input and validation.
  + Designed and prototyped UX flows in **Figma**, building a tabbed navigation system across five core app areas (Home, Workout, Planning, Community, Settings).
* **Back-End Development | Key Contributions**
  + Designed a scalable **MySQL** database schema using **Entity** **Framework** **Core**, supporting user authentication, profiles, workout planning, and activity tracking with flexibility for future platform migration.
  + Developed a **modular RESTful API** using the **ASP.NET Core MVC framework**, with multiple controllers handling categorized CRUD operations across the app’s core features.
  + Created structured **DTO models** to validate and sanitize incoming requests, ensuring consistent and secure data flow between client and server.
  + Integrated **Swagger UI middleware** to auto-generate API documentation and support streamlined developer testing and iteration.

Django-Based Web API System | Personal Study

* Built Back-End API using Django to control database operations management
* Evaluated REST API using Insomnia REST client for performance and accuracy.
* Implemented user authentication system with unit testing for reliability

Linux-Based OS Concepts - Design and Implementation | University Study

* Designed and implemented core operating system functionalities using C++.
* Applied paging and memory replacement algorithms for data transfer integrity.
* Wrote a multithreaded CPU scheduler for synchronizing multiple IO devices.
* Built File System with pathname resolution, symbolic linking, nested directories, memory allocation of data blocks, and secure handling of name collision.

Restaurant UI/UX Design and Development using React | Personal Study

* Designed user-centric UX/UI design from wireframe to prototype using Figma
* Built a responsive web app using React to display menus and handle reservations
* Performed unit testing with Jest, validating functionality and user interactions.

**Full Stack Fitness App** *(Expo, .NET 9, MySQL, AWS, BLE IMU)* | Personal Study – Project

A connected fitness app featuring real-time sensor streaming, user-generated content, responsive cross-platform UI, and social interaction. Built with Expo and .NET 9, backed by a MySQL database and future hosting on AWS.

**App Development Key Contributions:**

Developed a cross-platform mobile app using React Native + TypeScript in Expo, with adaptive UI powered by Tamagui and responsive sizing techniques.