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# Carter Ellis

## EDUCATION

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### Purdue University

B.S. Computer Science - GPA: 3.24

West Lafayette  
Aug 2022 - May 2026

### Relevant Coursework

Data Structures & Algorithms, Object-Oriented Programming, Software Engineering, Artificial Intelligence

## PROJECT EXPERIENCE

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### Pixel Par *Unity, C#, FMOD, Aseprite*

[github.com/Carter-Ellis/Pixel-Par](https://github.com/Carter-Ellis/Pixel-Par)

Released on Steam: [store.steampowered.com/app/3812820/Pixel\\_Par/](https://store.steampowered.com/app/3812820/Pixel_Par/)

- Designed and launched a commercial 2D game on Steam played by 100+ users, maintaining a 100% positive player rating.
- Implemented an object-oriented architecture, creating abstract classes and interfaces for game entities such as power-ups.
- Engineered and refined physics-based mechanics to ensure realistic ball interactions and accurate collision responses.
- Optimized performance and resolved bugs while integrating team-created sound effects and artwork to enhance gameplay.

### CartWizard *Python, Django, PostgreSQL, OpenAI API*

[github.com/Carter-Ellis/CartWizard](https://github.com/Carter-Ellis/CartWizard)

- Built a full-stack supermarket web app where users can browse products, manage carts, and receive AI-generated recipe suggestions.
- Designed Django models for products, categories, carts, and inventory using an object-oriented architecture and PostgreSQL relational schema.
- Integrated the OpenAI API (GPT-4o-mini) to generate personalized meal suggestions based on items in the user's cart.

### RoomEase *JavaScript, React, Express.js*

[github.com/CS-30700-RoomEase-Project/RoomEase](https://github.com/CS-30700-RoomEase-Project/RoomEase)

- Collaborated in a team of six to develop a full-stack web application using React, Express.js, and MongoDB to streamline roommate coordination.
- Contributed to backend development by building server endpoints to handle data requests from the frontend.
- Led development of the shared grocery list and bulletin board features, implementing functionality for adding custom items and posting public notes within roommate groups.

## TECHNICAL SKILLS

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**Languages:** Python, C#, C, C++, Java, JavaScript, SQL

**Frameworks:** Django, React, Express.js

**Databases:** PostgreSQL, MongoDB, SQLite, Neo4j, Firebase

**Developer Tools:** PyCharm, VSCode, Linux, GitHub