Dixon Zor

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EDUCATION

The Pennsylvania State University   Graduating: May 2025
College of Engineering
Bachelor of Science, Computer Science

PROFESSIONAL EXPERIENCE

The Human in Computing and Cognition Research Lab

Undergraduate Research Assistant   May 2023 – present
                                                                                                                                                                 Penn State University Park

- Designed **3 interactive research applications** using **Python** (frontend), **Java** (backend), and **XML.**
- Conducted 25+ studies to model **cognitive biases** in AI (ACT-R) decision making.
- Developed **LLM chatbots** for Engineering Competitions using **Retrieval-Augmented Generation** to fine-tune models.
- Created **automated data processing** and visualization scripts through **Jupyter Notebook**.
- Maintained **code/research documentation** with regular commits via GitLab.
- Authored a 20-page **paper about AI chatbots,** published by **the American Society for Engineering Education (ASEE).**

Penn State Brandywine IT Help deck

Customer Service Associate   Apr 2021 – May 2022
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- Resolved hardware, software, and network related issues with **troubleshooting, and network optimizations**.
- Installed **motherboards, processors, RAMs, graphics cards** and other peripherals in 12 different systems.
- Maintained 5-8 library computers with regular hardware configurations, software updates, and performance monitoring.
- **Answered calls** from students and customers, providing technical support and scheduling appointments.

SKILLS/INTERESTS

- Languages: **JavaScript, Python, C, C++, MATLAB, SQL, HTML5, CSS, Assembly, Verilog**
- Frameworks: React, Node.js, **Next.js**, Flask, Bootstrap, Tailwind
- Developer Tools: Supabase/Firebase, Vercel, Stripe, **Git**, Docker, Visual Studio, Jupyter Notebook, **PostgreSQL/MySQL**
- Other: Video editing, **Writing**, Public speaking, **Photoshop**, **Microsoft Suite**

PROJECT EXPERIENCE

MySQL/Python
Computer Store Database management system   Nov 2024 – Dec 2024

- Designed a store database management system consisting of 12 tables, schemas, indices, and transactions using **MySQL and python**.
- Developed **command line user interface** to interact and manipulate inventory, along with detailed documentation.
- Implemented **authentication features and role specification** for different users (admin, employee).

React Js/Express Js/CSS/HTML5
Responsive Multipage Portfolio Website   Sep 2024 – Dec 2024

- Designed a personal website to build comfortability with JavaScript and its frameworks.
- **Styled with React-Bootstrap and CSS.**
- **Fully responsive,** easy to navigate and deployed using **vercel.**

C programming & Concurrent System
Dynamic Memory Allocator and Channel Synchronization with Scheduling   Feb 2024 – May 2024

- Developed a dynamic memory allocator including **malloc, calloc, realloc, and free**.
- Implemented channel-based synchronization to manage concurrent processes in a **multi-threaded** environment.
- Utilized **semaphores** and **condition variables** to control synchronization between different processes and threads.