

## Education

---

### The University of Texas at San Antonio

June 2021 – May 2025

Database Systems, Application Programming, Systems Programming, Data Structures,  
Computer Organization, Computer Programming II,

## Work Experience

---

### Software Development Intern

May 2022 – May 2023

#### **Black Pearl Technology, Inc.**

- Designed a multi-platform mobile application with Xamarin Forms, a Microsoft SQL database & ASP.NET webserver to help scale productivity at a remote manufacturing facility.
- Created a component management & inventory system supported by a custom MH 10.8 ANSI barcode scanner in a mobile app enabling fast provisioning and insertion of items into a RFID-based tracking system.
- Developed a low-level micro-controller program to interface with a TI RFID/NFC Transceiver to read & write raw byte blocks and UIDs off ISO 15693 tags.
- Utilized custom dual SPI-bus design to interface a micro-controller and RF transceiver simultaneously.

### Projects Officer

April 2022 – May 2023

#### **The Association of Computing Machinery at UTSA**

- Engineered a majority of UTSA-ACM's new membership website & database that helped garner over 400 new registrations in it's first 4 months of operation.
- Improved database backup systems with cron-monitoring, implemented website uptime monitoring systems.
- Acquired organization sponsorships for ACM-UTSA's Portal app providing enhanced metrics & error-tracking
- Handled photography for RowdyHacks 2023.

## Projects

---

- [Portal](#) (2023) [portal.acmutsa.org](https://portal.acmutsa.org)
  - The complete membership and event-tracking solution for ACM-UTSA's members.
  - In its first six months of operation, it helped to obtain more than 400 new registrations and 1,000 event check-ins from 280+ unique members. Cut check-in time in half while reducing effort & member complaints.
  - Built with Next.js on React with tRPC & Tailwind, Prisma + PostgreSQL and completely [open-source](#).
- [Runnerspace](#) (2023) [runnerspace.xezion.dev](https://runnerspace.xezion.dev)
  - Developed a retro UTSA-themed social media website for [RowdyHacks 2022](#) in less than 36 hours with just Flask, Sass, SQLAlchemy ORM and one team member.
  - Features form validation, zero cost deployment on Railway/Supabase, active login/registration, profile editing, online indicators, profanity filters and a blog post [here](#).
- [The Office](#) (2023) [office.xezion.dev](https://office.xezion.dev)
  - Engineered a statically generated, Vue-based quote viewing and searching application for the popular 2005 sitcom "The Office", hosted on Firebase and Algolia.
  - Indexes over 50,000 quotes while providing <2ms real-time searches with Algolia.
  - Stores 201 episodes over 9 seasons, 100+ unique characters with app-wide hyperlink support.
  - Custom data extraction engine multiple layers of RegEx, XML/JSON and other text extraction features.
- [Phototag](#) (2023) [xezion.dev/phototag](https://xezion.dev/phototag)
  - Devised a command-line-based application in Python for the automated tagging of photos with useful keywords based on their content (people, buildings, cars etc.) using Google's Vision API.
  - Can tag 100 high quality JPEG photos in 60 seconds with 10-15 tags each on average.

## Languages

---

Python, Java, C, Kotlin, C#, Javascript/Typescript, CSS, SQL, Bash, React, Vue.js