

# PETER JOHN MENDOZA

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## EDUCATION

**University of Houston** - Bachelors of Science, Computer Science, GPA: 3.56 **Aug 2022 - Dec 2024 (Expected)**  
**Houston Community College** - Associate of Science, Computer Science, GPA: 3.86 **2022**

- Also pursuing a **minor** in **Mathematics**
- Relevant Coursework: *Database Systems, Operating Systems, Algorithms and Data Structures, Programming and Data Structures, Computer Organization and Architecture, Introduction to Automata and Computability*
- Clubs: CougarCS - Member

## TECHNICAL SKILLS

**Languages** | C++, Python, HTML/CSS, Javascript, SQL  
**Tools** | Git/GitHub, Microsoft Azure, Microsoft SQL Server, MySQL, MongoDB  
**Frameworks/Libraries** | React, Express.js, Node.js, numpy, OpenCV

## EXPERIENCE

**Tutoring** **Jan 2022 - Present**  
*For Mathematics and Computer Science coursework previously taken*

- Helped peers with Math and Computer Science coursework (mainly Calculus 1, Discrete Math, Intro to Programming, Programming and Data Structures)

## PROJECTS

**Project Management Systems Database** | [github.com/wuminghuanying/Team18-Project](https://github.com/wuminghuanying/Team18-Project) **Sep 2022 - Dec 2022**  
*Full-stack, web app* HTML | C# | ASP.net (MVC) | Microsoft Azure | SQL | Microsoft SQL Server | Git/GitHub

- Developed a web application that helps keep track of projects (budget, supervisors, etc.)
- Incorporated **role-based access control** and **security** for data using Microsoft SQL Server and ASP.NET MVC
- Designed and implemented UI for data reports/forms, login page, and entry forms into database with Razor Pages
- Deployed website and database using **Microsoft Azure**

**Shannon-Fano-Elias Coding** | [github.com/petermendoza/PA3-3360](https://github.com/petermendoza/PA3-3360) **Sep 2022 - Nov 2022**  
***Multithreading** application to implement Shannon-Fano-Elias Coding* C++ | Linux (WSL) | POSIX Threads

- Developed a multi-threaded text encoder using C++ and POSIX threads (pthread) library
- Utilized mutex locks and condition variables to ensure **thread synchronization** for accessing shared data and printing results in a thread-safe manner.
- Employed dynamic memory allocation and vector containers to manage and manipulate data efficiently, providing scalability for various input sizes.

**Shape Recognition and Image Compression** | [github.com/petermendoza/PA2-4393/](https://github.com/petermendoza/PA2-4393/) **March 2023**  
*Image analysis and **compression** techniques* Python | numpy | OpenCV

- Implemented image processing methods such as histogram analysis, binarization, and blob coloring.
- Computed optimal thresholds for **binarization** using iterative methods.
- Encoded and decoded binary images efficiently using **Run-Length Encoding**

**Portfolio Website** | [petermendoza.me](https://petermendoza.me) **Sep 2023**  
*Front-end web app* GitHub | HTML | CSS | JavaScript

- Shows information about me using HTML/CSS techniques and JS methods, hosted on GitHub Pages