

# Mitchell Sappington

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## EDUCATION

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### Texas A&M University

#### College Station, Texas

Bachelor of Science in Computer Science

May 2024

Engineering Honors Program

Cumulative GPA: 4.0/4.0

## SKILLS & HONORS

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

**Skills:** Image Processing, Web Scraping, Data Science, Database Management, Full Stack Web Development

**Honors:** Eagle Scout Award, Engineering Honors

**Interests:** Software Engineering, Image Processing, Machine Learning, Artificial Intelligence, Backend Development

## INVOLVEMENT / EXPERIENCE

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### BNSF Logistics

June 2022 – August 2022

IT – BI Intern

- Responsible for creating apps employing data queried from databases in both Oracle SQL and SQL Server.
- Experience with Python data science and BI packages such as Pandas, Scikit-Learn, Plotly, and Streamlit.
- Trusted with creating accurate interactive dashboards utilized by Sales and Operations teams to make intelligence pricing decisions.
- Worked with inhouse C# APIs to communicate faulty loads to their assigned managers.

### TAMU Robomasters

September 2021 – Present

Member

- Member of the modeling team, responsible for making machine learning models for aiming.
- Worked on improving armor plate detection so the model does not detect a team base while it is invulnerable.
- Currently working on particle filter designed to help robot autonomously navigate field based on sensor data and probable positions based on previous measurements.

### YAH Agency

September 2021 – December 2021

Employee

- Provide remote authoring support on various projects for highly reputable clients.
- Developed a web scraping program in Node.js to compile a spreadsheet of holiday events to save the company time.
- Assist in labeling and uploading images to the AES system and linking them with pages.

## PROJECTS

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### Hackathon, Impractical Hackers

- Developed a facial expression recognition and screen recording system using the OpenCV library in Python and Haar Cascades. Worked in a collaborative environment under strict time constraints.
- 3<sup>rd</sup> most liked project out of 52 entries.

### Professor Bot

- Developed a Discord bot using the node.js Discord API. Web scrapes professors grade history using the request, cheerio, and puppeteer libraries. Sorts the professors by average GPA and compares them to the course average GPA.
- Provides professor insights such as the percent of students that made each letter grade, average GPA, and link to their ratemyprofessor.com page to help students choose the best professor for them. Has been called 2,500+ times.

### Sudoku Solver

- Created a desktop application using the tkinter library with an intuitive GUI that users can use to solve sudoku puzzles.
- Uses image processing techniques to isolate individual sudoku squares from images using the OpenCV library in Python.
- Utilizes a convolutional neural network made with TensorFlow, a machine learning Python library developed by Google, and the MNIST database to recognize digits from images.
- Applies recursion, object-oriented programming, and multi-threading to solve and display the results.