

# Ahmed A. Safa

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## Education

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**Bachelor of Science in Computer Science**, Portland State University, GPA 3.80 2022 –2024

**Associates of Science**, Portland Community College, GPA 3.69 2020 –2022

## Technical Skills

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Programming: **C++/C, Python, Java, JavaScript C#, HTML/CSS**

Other relevant skills: **Linux, GitHub/Git, GDB, Pandas, NumPy, Unit testing, Vim, React.js, Docker, Google Cloud Platform**

## Experience

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**Team Lead**, Capstone Project March 2024– Present

- Led a six-member team to develop an interactive campus map using Leaflet, OpenStreetMap, HTML, CSS, and JavaScript, enhancing user engagement and educational outreach.

**AI Research Intern**, McNair Scholars Program May 2024 – Present

- Engaged in the project “Hangmanual”, exploring perfect play strategies in Hangman by implementing machine learning models to analyze and optimize guesser and setter strategies, aiming to define and utilize Nash Equilibrium and heuristic methods within an asymmetrical game framework.

**Computer Science Tutor**, Portland State University, Portland Community College September 2022 – Present

- Conducted tutoring for a variety of Computer Science courses.

## Projects

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**News Aggregator (Python)** August 2023

*Personal Project that takes the top 20 headlines in the US and provides a translation for each headline in 8 languages*

- Developed a multilingual news aggregator web application, leveraging News API and Google Cloud Translate API to dynamically display top headlines in the US across multiple languages.
- Deployed the application using Docker for containerization and Google Cloud for robust, scalable hosting.

**Personal Portfolio website (React.js)** August 2023

*Personal project that displays my portfolio: [www.ahmedsafa.com](http://www.ahmedsafa.com)*

- Designed and developed a personal portfolio website using React.js.
- Integrated EmailJS to create a functional contact form, enabling anyone to contact me through the website.
- Applied CSS animations and transitions to enrich the visual aesthetics of the website.

**Handwritten Digit Recognition (Python/NumPy)** August 2022

*Personal project that recognizes handwritten digits from a 28x28 pixel image*

- Developed a neural network module to implement stochastic gradient descent for a feedforward network.
- Applied a backpropagation algorithm to train the model for accurate digit classification, resulting in a 96% accuracy rate.

## Other

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- Vice President of the chess club at Portland State University