Andre Nguyen

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Education

University of Pittsburgh 2020-Present

Bachelor of Science, Computer Science

Relevant Coursework:

- *Object Oriented Programming* ***(Java)***
- *Intro to Engineering Computing* ***(C)***
- *Big Ideas and Computing* ***(Python, Git)***
- *Computer Organization & Assembly*
- *Discrete Structures*
- *Algorithms and Data Structure* ***(Java)***

Projects and Extracurricular

- String Autocompletion Engine **(Java)** **(Fall 2022)**
  - Java backend that implements an autocomplete feature that predicts what a user wishes to type before they are finished typing
  - Implemented a **custom** Radix Search Trie (De La Briandais Trie) **data structure** to store user strings and the history of strings user had implemented
  - Used **custom search algorithm** for De Le Briandais Trie that bases off number of times user had previously searched for a string
  - Developed and ran own **custom test cases** to ensure efficiency of near **constant runtime** and usability
- Saving Grocer **(Python, Flask, Selenium, HTML, CSS)** **(Spring 2022)**
  - *Winner of Steelhacks 2022 Hackathon*, Smart Cities/Urban Planning Track
  - Python web app that scrapes pricing information of a user input grocery item from local grocers. Compares prices from grocers and returns which store has the lowest price.
  - Designed website concept and layout, data scraping bots, and comparison functions
  - Sorted through HTML paths to retrieve most relevant product from each grocer
- Project Love Coalition Pittsburgh **(HTML, CSS, JavaScript)** **(Spring 2022)**
  - Worked in a team of four to help redesign and fix PLC PGH's website to better engage with users
  - Volunteered through University of Pittsburgh's iServe nonprofit program
  - Familiarized and practiced **Agile** procedures throughout project development
- Pittsburgh Quality of Life **(Python)** **(Spring 2022)**
  - Sorted through public Pittsburgh data to signify which Pittsburgh neighborhood had the best quality of life
  - Used Python **Pandas** library to analyze CSV files and used **GeoPandas** to work with geographical data of Pittsburgh
  - Created and used custom metrics to standardize scores for each neighborhood in Pittsburgh
- Sorting Algorithm Analysis **(Java)** **(Fall 2021)**
  - **Implemented four sorting algorithms** and applied different test cases showcasing which algorithm is superior in each respective scenario
  - Ran test cases on varying sizes of data sets up to **3.2 million** datapoints
  - Graphed results and data along with brief detailed analysis of algorithms showcasing time complexity/efficiency
- Dining Hall Menu Ordering Program **(C)** **(Fall 2020)**
  - Program written in C that directed students through a menu ordering system that allowed students to order food from a dining hall
  - **Led team of three**, organized meetings, helped teammates debug, assigned tasks to teammates
  - Created as a solution proposal to dining hall accommodations during COVID-19 pandemic
  - Designed ordering system, file organization, and printing file functionalities

Awards

- Best Mechanical Engineering and Material Sciences Paper **(Spring 2021)**
  - *"The Hemolung: An Alternative to Traditional Mechanical Ventilators"*
  - Researched and analyzed runtime performance of Hemolung and its uses in the COVID-19 pandemic
  - Met with CEO of ALung to learn about computing technologies of the Hemolung

Skills and Technologies

- Programming Languages and Technologies: **C, Java, Python, HTML, CSS, Javascript, Git, Flask, Pandas**
- Proficient in data organization with Excel and MatLab
- Efficient in planning and engineering team-based projects
- Excellent written and verbal communication skills