Andre Nguyen

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Education

University of Pittsburgh **(August 2020 - April 2024)**
Bachelor of Science, Computer Science

Professional Experience

- **SEI Investments** **(Summer 2023)**

  Software Developer Intern
  - Worked in a team of 5 interns to propose generative AI tools to improve HR efficiency, attract and retain talent, resulting in the founding of SEI Center for AI Excellence
  - Developed frontend features on SEI's Wealth Platform using **Angular, Typescript, Java, and Postman**
  - **Improved testing efficiency by 20%** by developing automated end-to-end test cases for SWP using **Typescript and Playwright**
  - Assisted in Account Open team's Java 17 migration process using **Maven** resulting in a **performance boost of 15% for API response time**

Projects

- **Iris: Natural Language Browser Navigation** **(Spring 2024)**
  - *Winner of Steelhacks 2024 Hackathon, 1st Place*
  - Chrome extension web browsing navigation agent aimed towards visually impaired users that leverages **GPT 4.0 LLM** to translate natural language into Selenium code
  - Prompt chaining of the DOM of the current page is fed to GPT LLM to determine what steps to take next until completion
  - Final destination web page is summarized using text to speech
- **Forest Worker Database Management System** **(Fall 2023)**
  - **PostgreSQL database management system** that supports an **IoT** system that monitors forests
  - Implemented schema, triggers, and analytical queries for main database "ArborDB"
  - Assisted by a Java backend program to connect to PostgreSQL database using JDBC
- **String Autocompletion Engine** **(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** **(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.
  - Implement Selenium bot agents to retrieve relevant product information for price comparison

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

Programming Languages: Java, Python, Typescript, JavaScript, Rust, C/C++, PostgreSQL, SQL, Svelte, React, Angular
Technologies: Linux, Git, Google Cloud Platform, Azure, Selenium, Playwright, Pandas, JDBC, Flask, Node.js, npm