

Peiyi Wu

Seeking a summer internship (5/1/2024 - 8/24/2024) as a Software Engineer

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EDUCATION

- **Northeastern University** Seattle, WA
Master of Computer Science GPA: 3.5/4.0 *Sep 2023–Apr 2025*
Well-Performing Courses: Computer Network, Programming Design, Mobile App Development
- **University of Pittsburgh** Pittsburgh, PA
Bachelor of Computer Science GPA: 3.5/4.0 *Sep 2019–Apr 2023*
Well-Performing Courses: Interment Programming using Java A, Algorithms Data Structures A, Software Engineering A, Software Quality Assurance A, Data Management A

SKILLS SUMMARY

- **Programming Languages:** Python, JAVA, C Language, TypeScript, HTML, CSS
- **Development Tools:** Linux Shell, Visual Studio, Android studio, IntelliJ, Xcode, Vim, Git
- **Frameworks:** React, jQuery, Flask, Angular

PROJECTS

- **Bad Kids Redemption (JAVA, XML)** Mobile App development course
Develop a narrative-driven game *Spring 2024*
 - Used Android studio to design and develop a complex branching narrative game, offering users multiple endings based on strategic decisions
 - Implemented Firebase for authentication and data management to ensure seamless login and user history recording
 - Incorporated AI-generated imagery for automated character illustration within the app, ensuring a consistent visual representation across diverse scenarios
 - Leveraged JAVA multithreading mechanisms to implement idle game mechanics in the app, optimizing performance and responsiveness for enhanced user interactivity and experience
- **Chatroom (IntelliJ, JAVA, JUnit test)** Programming Design course
Developed a server-client chat application/protocols *Spring 2024*
 - Used JAVA to develop a multi-threaded chat server application leveraging socket programming to facilitate real-time communication between multiple clients
 - Implemented byte-level message serialization and deserialization protocols to facilitate seamless data transmission over the network, optimize for extensibility
 - Utilized JUnit test and Mockito frameworks to ensure robustness and reliability, achieving a test coverage rate of 70%
- **Spaceship Seeker(Angular, HTML, SCSS, Typescript)** Web development course
A reactive web application for spaceship news grabbing *Spring 2022*
 - Built a web application with Angular CLI, featuring a navigation bar with four buttons at the top of the page, each redirecting to a different page.
 - Used Typescript for back-end implementation. Used Angular, HTML, and SCSS for front-end implementation
 - Integrated RESTful APIs to request information from NASA and SpaceX databases
 - Developed four main high-level functionalities: a countdown for the next soonest launch; search and display picture or video of satellites; an interactive map page with clickable dots scattered on every rocket location; a comment page with Firebase (cloud database) for the history of comments and likes

EXPERIENCE

- **Undergraduate Research: Overlay Network Construction (Python)** *Summer 2022*
Implemented and evaluated overlay network topology
 - Used Python to implement algorithms based on a greedy algorithm to compute nearly-optimal fault-tolerant weighted double direction spanners in polynomial time, based on the paper: Efficient and Simple Algorithms for Fault-Tolerant Spanners
 - Investigated algorithms(DFS, Dijkstra, Max flow, Disjoint) for constructing overlay network topologies
 - Defined metrics(Disjoint path, reliability, weight, etc.) to quantitatively compare the quality of different overlay topologies that support highly reliable, low-latency communication while being robust to failures
 - Calculated those metrics in Python and compared the topologies generated by the algorithms implemented.