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KAIHAO (PETER) LIU

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[GitHub](#) [Personal Website](#) [Linkedin](#)

SUMMARY

I am a junior-year student at UNC-Chapel Hill. While exploring what I want to pursue in the computer world, I am eager to test my skills in software engineering.

COURSES TAKEN

- Algorithms and Analysis
- Computer Organization
- Data Structures and Analysis
- Files and Databases
- Introduction to Data Models and Inference
- Introduction to Probability
- Methods of Data Analysis
- Models of Languages and Computation
- Modern Web Programming
- Introduction to Machine Learning
- Computational Photography

SKILLS

Programming Languages:

Java, C, Unix, TypeScript, HTML, CSS, JavaScript, MIPS, and Python

Web design related:

React, Vue, Node Js, and JQuery

Database:

SQL, MySQL, MongoDB, and excel

Languages:

Mandarin (fluent), English (fluent), Japanese (Intermediate level), and Spanish (beginner level)

Other Related Skills:

MS Office, Adobe Photoshop, Illustrator, Audition, Tinkercad, Fusion 360

EDUCATION BACKGROUND

University of North Carolina at Chapel Hill

Bachelor of Science in Computer Science, minor in Statistics and Japanese

GPA: 3.93

WORK EXPERIENCE

Intern • Sichuan Neurogin Bio Tektronics Limited • 2021. 06 – 2021.08

- Created a new website for the company using HTML, CSS, and vanilla JavaScript. I am still working with my colleagues to finalize the design.
- Created a tool to preprocess EEG data. The process included file format changing, EOG and ECG feature removal, frequency filter, and a quality evaluation algorithm.
- Participated in regular meetings, including meetings for the board of directors, and reported work progress.
- Participated in data pipeline construction using Spotify's Luigi.

Research Assistant • UNC Chapel Hill • 2021. 02 - NOW

- Working with a Ph.D. student on reconstructing a detailed face model from one input image.
- The face model is based on a learned model using methods of deep learning.
- Also worked on tasks relating to image comparison and face detection.

Learning Assistant • UNC Chapel Hill • 2020. 08 - NOW

- Help the professor with the class "Algorithms and Analysis" to make worksheets, homework, and exams.
- Host office hours and help to organize course-related activities for the students.
- Help to maintain the course website, course database, and improve the auto-grading system.

Parttime Assistant • Microsoft CN • 2020. 06 - 2020. 08

- Studied general structure of cloud computing and had hands-on experience of using Azure.
- Worked on tasks related to Microsoft Azure (Mainly worked to help improving User Interface).

Game Testing Intern • Qing You Yi Le Technology CO. • 2017. 07 - 2017. 08

- Learned about the work content of different departments under the guidance of a mentor in a gaming company and tried to use C# and Unity to program and test games.
- Tested for bugs, wrote test logs, and shared opinions in daily meetings for a 3D real-time turn-based card game "Yao Ji OL2."

Gm Assistant • Gainko Design and Mobile Event • 2017. 06 - 2017 .07

- Studied the general structure of a tech firm and the basic concepts of management, helped the general manager to record daily conferences, organized documents and communicated with members of both the NA and Chinese branches.
- Participated in developing the two software (item trading software and donating software for NPO).

PROJECTS

Miao Miao - Social Web App

- website link: <https://miaomiao-chat.herokuapp.com/>
- With three other teammates in less than five days, developed a social app called "Miao Miao" from scratch using JavaScript, HTML, CSS, and a REST API for the backend. The app is fully deployed and can be accessed from the web anywhere.
- Functionalities including a user-matching system, a live chat, an anonymous post box, and a quiz game
- Did an expo demonstration to the entire class and received a 94 on the whole project.

Self-Study - Social Web App

- website link: <https://master-upbeat-yalow-b67ef2.netlify.app/>
- Personal project developed using React and GraphQL.
- Deployed and accessible from web.
- Functionalities including a Twitter like posting system which enables user to post, like, and comment.

Sushi Restaurant (Java) ([GitHub Link](#))

- Designed a game containing several functions including ingredient selection system, sushi making system, pricing system, price comparison system, spin system (record the purchase and expiration of sushi), ranking system, and AI chefs and AI customers.
- Took 20 hours to complete the game design project. The project was praised by the professor, and I received full credits.

Data Model Projects (Java)

- Programmed linked lists, binary search trees, binary heaps, splay trees, and graphs using Dijkstra's algorithm.
- It took 25 hours to complete the development, and all projects received full credits.