

# Yulu Pan

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## EDUCATION

### University of North Carolina at Chapel Hill

*Master of Science*

**Major:** Computer Science

**Chapel Hill, NC**

*Aug 2023 - Dec 2024*

### University of North Carolina at Chapel Hill

*Bachelor of Science*

**Major:** Computer Science, Mathematics

**Chapel Hill, NC**

*Aug 2021- May 2023*

**GPA:** 3.74/4.00

### Brandeis University

*Bachelor of Science*

**Major:** Computer Science

**Waltham, MA**

*Aug 2019 - May 2021*

**GPA:** 3.94/4.00

## RESEARCH EXPERIENCE

### University of North Carolina at Chapel Hill

*Research Assistant, Mentored by Soumyadip Sengupta*

**Chapel Hill, NC**

*Aug 2022 – May 2023*

- Generated datasets to explore preservation of r-PPG signal in motion transfer between videos
- Utilized facial expression analysis tools to category and visualize the data
- Created large training datasets for predicting the best additional image angles improve 3D reconstruction quality
- Designed and trained a reinforcement learning model for best next angle prediction in 3D reconstruction

### Nanjing University Natural Language Processing Lab

*Research Assistant*

**Nanjing, China**

*June 2021 – Aug 2021*

- Extracted and cleaned policy data with python web scraping
- Trained the data with natural language processing models to perform categorize task and visualized with knowledge graph

### Brandeis Brain Computer Interface Club

*Research Assistant*

**Waltham, MA**

*Dec 2020 – May 2021*

- Used Machine Learning algorithms such as deep CNN and clustering to analyze EEG signals for human behavior patterns
- Conducted literature review, data preprocessing and analysis in Matlab

## TEACHING EXPERIENCE

### University of North Carolina at Chapel Hill

*Undergraduate Learning Assistant*

**Chapel Hill, NC**

*Aug 2022 – May 2023*

- Assisted professors with holding office hours, exams write up and grading on topics such as data structure, code organization for large project, industry standard developing tools in Java

### Brandeis University

*Teaching Assistant*

**Waltham, MA**

*June 2020 – May 2021*

- Created test cases for assignments and held office hours for data structure and algorithm analysis class in Java
- Designed and held weekly recitations for course material practice and answering students' questions

## PROFESSIONAL EXPERIENCE

### Mobile APP: Branda

*Software Engineer*

**Waltham, MA**

*March 2020 - May 2021*

*Branda is a mobile App working as a two-sided platform to connect Brandeis students with essential campus services*

- Added features such as dark mode, COVID information page to the app
- Rewrote the backend platform with React and Next.js for better maintenance and framework

## Publications

Yin, JianJian, Zheng, Zhichao, **Pan, Yulu**, Gu, Yanhui, and Chen, Yi, Semi-Supervised Semantic Segmentation with Multi-Reliability and Multi-Level Feature Augmentation. Expert Systems with Applications, Volume 233, 15 December 2023, 120973

Akshay Paruchuri, Xin Liu, **Yulu Pan**, Shwetak Patel, Daniel McDuff, and Soumyadip Sengupta. Motion Matters: Neural Motion Transfer for Better Camera Physiological Sensing. *arXiv preprint arXiv:2303.12059*.

## ACTIVITIES

### Brandeis VALE Project

*Project Leader*

**Waltham, MA**

*Jan 2020 - May 2021*

- Scanned anthropology artifacts and reconstructed them as 3D models and built a 3D interactive VR museum with Unity engine to display the artifacts

## SKILLS

**Software:** Java, Python, MATLAB, Unity/C#, Machine Learning (Pytorch)

**Languages:** English (*Proficient*), Mandarin (*Native*)