

# Pinyi Wu

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## EDUCATION

### Columbia University

*Candidates for Master of Science in Biostatistics*

**New York, NY**

*Class of 2023*

### University of Rochester

*Bachelor of Science in Brain & Cognitive Science, Bachelor of Arts in Data Science  
Minor in Psychology*

**Rochester, NY**

*Class of 2021*

- GPA: 3.99/4.0
- Honors: Summa Cum Laude, Dean scholarship, Dean's list

## SKILLS

- Programming language: Python, Java, R Studio, Excel, MATLAB, Spike 2, SAS; operating Linux, Mac, Windows system
- Excellent communication skills proven by multiple teaching assistant jobs
- Laboratory skills: brain perfusion fixation, mice brain dissection, mice behavior training
- Foreign languages: native speaker of Mandarin, Japanese N2, intermediate learner of Spanish

## TEACHING EXPERIENCE

### Computing Club at CUIMC

**New York, NY**

*Leader and Lecturer of the Python Workshop*

*Oct. 19<sup>th</sup>, 2021*

- With another leader, presented introductory Python knowledge and coding skills to peer students in the Computing Club at CUIMC.
- In charge of the implementation and demonstration of programming, covered topics including Python basics data structures, data preprocessing, data frame, graphing, and machine learning using scikit-learn.

### Center for Excellence in Teaching and Learning

**Rochester, NY**

*Tutor for multiple subjects*

*Feb. 2019 – May 2021*

- Tutored peer students on a one-on-one basis in various subjects, including Computer Science, Brain and Cognitive Science, and Biology.
- Answered questions regarding course materials, offered instructions to homework assignments, made test preparation plans, and advised overall study skills in specific subjects upon the requests of each tutee.

### Teaching Assistant

**Rochester, NY**

*Lab Teaching Assistant for CSC 161: Intro to Programming*

*Sept. 2020 – May. 2021*

- Held bi-weekly lab sessions, answered Python-related questions, offered coding help and instructions regarding weekly assignments and a 3-staged project on various Python topics. Graded weekly lab assignments, projects, midterms, and final exams.

*Teaching Assistant for BCS 204: Lab in Cognitive Neuroscience*

*Sept. 2020 – Dec. 2020*

- Held weekly office hour, offered instructions on analysis of behavioral, EEG, fMRI data using Excel, EEGLAB, and SPM12, assisted in recording EEG signals in the actual laboratory setting.

*Teaching Assistant for BCS 110: Neural Foundations of Behaviors*

*Sept. 2019 – Dec. 2019*

- Held weekly recitations to a group of 15 students, reviewed lecture materials, and answered questions.
- Additionally held four 2-hour review sessions with three other teaching assistants to help students prepare for unit exams. Graded 4 unit exams and 1 optional final.

## COURSE PROJECTS AND PAPERS

### Capstone Project: Predicting Filter Failure in Trucks

**Spring 2021**

- With four teammates, built a comprehensive model to predict the probability of Diesel Particulate Filter failure of trucks based on various features using Python Jupyter notebook. In collaboration with the transportation company Vnomics.

- Completed data preprocessing, data visualization, time series analysis, baseline models, final pipelines, and 2 presentations. Wrote a 15-page report.

### **Database and Webpage Design of Bookkeeping in a Bookstore**

**Fall 2020**

- With two teammates, designed and implemented the database and web-interface of a virtual bookstore using HTML, PHP, and SQL.
- Self-designed the web-interface with various functions, including customers' signing up, logging in, searching books, buying books, and employees' logging in, managing databases, etc. All actions on the web-interfaces resulted in changes in the original database.

### **Improvement of Movie Recommendation Algorithm: a hybrid approach**

**Spring 2020**

- With a partner, designed and refined a better movie recommendation algorithm using integrated modeling under the instruction of Professor Jiebo Luo.
- Coded in Python, combined content-based filtering, and user-based collaborative filtering approach to obtain an improved movie recommendation system, with more variability and relatively higher precision than the user-based collaborative filtering approach alone. Wrote a 5-paged research paper.

## **RESEARCH EXPERIENCE**

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### **Adam Snyder lab at University of Rochester**

**Rochester, NY**

*Research Assistant*

*Feb. 2020 – May 2021*

- Assisted in research focusing on decoding EEG signals of novel detections of different kinds of visual components in macaques. Helped analyze EEG data using Python and MATLAB, chaired macaques, prepared experiments setups, provided entertainment and foods to macaques.

### **Xiongjie Yu lab at Zhejiang University**

**Hangzhou, China**

*Research Assistant*

*Jul. 2019 – Aug. 2019*

- Trained a rat to perform discrimination task on time intervals between a pair of sound stimulus, coded in Spike 2 and MATLAB for experimental protocols and data analysis
- Assisted in novelty detection in sound frequency in nonhuman primates, examining neural activity using electrophysiology (EP)

### **Hailan Hu lab at Zhejiang University**

**Hangzhou, China**

*Research assistant*

*Jun. 2019 – Jul. 2019*

- Trained C57 mice using the Tube Test protocols, used optogenetic stimulation to examine changes in social hierarchy on 20 mice (5 cages), recorded and marked mice behaviors using BORIS
- Used perfusion fixation to prepare brain tissue for microscopy observation, dissected brains and observed under fluorescence microscopy, assisted in observation, and recording of calcium signals