Patrick (Peiyuan) Ma

pm@unc.edu | 314.332.8767 | Chapel Hill, NC | patrickma.me

Education

The University of North Carolina at Chapel Hill   08/2019-05/2022

B.S. in Computer Science, Statistics and Analytics & Minor in Mathematics   *Chapel Hill, NC*

- **Cumulative GPA:** 3.94/4.0
- **Related Coursework:** Algorithms, Data Structures, Operating Systems, Databases, Web Development, Statistical Learning
- **Honors:** SMART Research Scholarship, Dean's List (all semesters)

Huazhong University of Science and Technology   09/2017-07/2019

Mechatronics (transferred out)   *Wuhan, China*

- **Cumulative GPA**: 93/100 (3.98/4.00), **Ranking**: 2/242
- **Honors:** National Scholarship in China (2018), Straight-A Student at HUST (2018)

Skills

Languages: Python, Java, JavaScript, C, HTML, CSS, SQL

Development: Spring, Django, Vue, jQuery, Bootstrap, Docker, Maven, Git, Vim

Statistics/Machine Learning: R, Keras, Tensorflow.js

Selected Projects

Eye Tracking for People with ALS | UNC SMART Research   05/2020-08/2020

- Developed a cheap eye tracking solution with logistic regression, CNN, SVM, transfer learning on collected data
- This isn't a general eye tracking solution as I collected low-resolution data captured using self-developed websites
- Achieved an average test score of 0.955+ on 1000+ collected data using scikit-learn and Keras

Mock MOOC | Personal Project   07/2020-Present

- Developing an online video course platform using **SpringCloud**, **Vue CLI**, **MyBatis**
- Developed an admin website enables the user to perform CRUD operations on databases
- Used **FreeMarker** template engine generating codes for service, controller, dto, and vue in 2 minutes

Simple Social Site | Personal Project   01/2020-02/2020

- Implemented a webapp to allow users to create profiles, post articles and comments using **Django** and **SQLite** for data storage

Keep My Professor Dry | COMP 401 Hackathon   11/2019

Best Hack for Water Gun Racing Game

- Used **Java** Swing to create a challenging water gun racing-like game by randomization and punishment for shooting mistakes
- Collaborated with 2 teammates using **Git** for version control

Experience

Learning Assistant & Peer Tutor at UNC   01/2020-Present

- Developing COMP 550 (Algorithms) websites using **Bottle** and holding office hours to answer questions about COMP 550
- Provided 2 drop-in office hours per week to help students with questions on OOP, Discrete Math, and Introductory Statistics

Research Assistant at HUST Dept of Mechanical Engineering   03/2018-02/2019

- Proposed a method for quantifying dispersion of CNTs and improved its running time from $O(n!)$ to $O(n^3)$ in **MATLAB**

Leadership

Social Survey of Low-income Families | Team Leader | Xiaogan, China   06/2018-08/2018

- Used matplotlib library in **Python** to visualize and analyze the health insurance data of low-income families in Xiaogan City
- Contacted government officials, submitted relevant materials, wrote reports about families with mentally ill patients
- Received reporting from four local media and won 1450+ hits on our official account's passages
- Won Excellent Social Practice Team of HUST (2018), Excellent Social Practice Individual of HUST (2018)