Peiyuan Ma

mapeiyuan1874@gmail.com | 314.332.8767 | Chapel Hill, NC | https://patrickma.me

Education

University of North Carolina at Chapel Hill May 2022

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

- **Cumulative GPA:** 3.94/4.0
- **Coursework:** Algorithms (TA), Data Structures, Operating Systems, Databases, Web Development, Statistical Learning
- **Honors:** SMART Research Scholarship (2020), Dean's List (all semesters)

Huazhong University of Science and Technology Sep 2017-Jul 2019

Major in Mechatronics *Wuhan, China*

- **Cumulative GPA**: 93/100 (3.98/4.00), **Ranking**: 2/242
- **Honors:** National Scholarship in China (2018, top 1%), Straight-A Student at HUST (2018, top 2%)

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 May 2020-Aug 2020

- Developed a low-cost eye tracking solution with logistic regression, CNN, SVM, transfer learning on collected data
- Developed a unique website in **face-api.js** to enable users to capture low-resolution eye gaze data within a single press
- Achieved an average test score of 0.955+ on 1000+ collected data using **scikit-learn** and **Keras**
- Researched users' feedback and developed a website for querying and visualizing data to filter out corrupted data
- Perfected the demo website in **Tensorflow.js** to enable users to see the eye tracking results after training

Mock MOOC | Personal Project Jul 2020-Present

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

Conway's Game of Life | Personal Project Nov 2019-Dec 2019

- Implemented Conway's Game of Life with MVC architecture, design patterns, and **Java** Swing GUI API
- Developed config options to enable users to set the board size, intial state, survice&birth thresholds, delay between states, etc

Keep My Professor Dry | COMP 401 Hackathon Nov 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 | UNC CS Dept & Learning Center Jan 2020-Present

- Developing COMP 550 (Algorithms) websites using **Bottle** and testing auto-graded assignments with weekly SCRUM
- Holding 6 drop-in office hours per week to guide students with problem sets and understanding concepts in Algorithms
- Provided 2 drop-in office hours per week to help students with questions on OOP, Discrete Math, and Introductory Statistics

Research Assistant | HUST Dept of Mechanical Engineering Mar 2018-Feb 2019

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