

Patrick (Peiyuan) Ma

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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, OOP and Design Patterns, Statistical Machine Learning, Computer Organization, Data Analysis, Linear Algebra, Discrete Math, Numerical Analysis, Probability, Differential Equations

Huazhong University of Science and Technology (HUST, 7th in China by 2019ARWU)

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

Technical Skills: Java, Python, R, MySQL, C/C++, JavaScript, HTML, CSS, MATLAB, Django, XML, Linux, Git, Markdown

Languages: Chinese, English

Projects

Simple Social Site | Personal Project

01/2020-02/2020

- Developed a social web app that enables users the ability to interact with others using **Django**, **Bootstrap**, **CSS**, and **JavaScript**

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

Simple Instagram Android Application | Personal Project

11/2019

- Developed an Instagram-like app in **Java** that supports user login, viewing and posting with photos using **Parse**
- Utilized Fragments and Bottom Navigation View to achieve navigation between posts, capture, and profile tabs

Simple Twitter Android Application | Personal Project

10/2019-11/2019

- Developed a Twitter-like app in **Java** that supports user login, viewing and posting tweets features using **RESTful API**
- Utilized Room for persisting tweets and users
- Used SwipeRefreshLayout and customized RecyclerViewScrollListener to enable pulling down to refresh, infinite pagination

Experience

Peer Tutor at UNC Learning Center

01/2020-05/2020

- Provided one-on-one help to drop-in students in OOP and Design Pattern, Discrete Math, and Introductory Statistics

Research on Properties of Carbon Nanotube | Research Assistant | Advisor: Prof. Li Li & Ming Xu

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**
- Fabricated 100+ carbon nanotube/epoxy composites and tested their mechanical properties by SEM, DMA
- Researched production and mechanical performance of novel materials (e.g. carbon nanotubes)
- Simulated the impact properties of novel composite materials (CNT@Ni foam) in **Abaqus**

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)