Daniel Tse

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EDUCATION

University of North Carolina at Chapel Hill - Chapel Hill, NC B.S. in Statistics May 2024
- **GPA:** 3.61/ 4.0 Degree with Distinction
- **Relevant Coursework:** Mathematical Statistics, Methods of Data Analysis, Stochastic Modeling, Linear Algebra, Discrete Mathematics, Introduction to Programming

WORK EXPERIENCE

Department of Statistics and Analytics at UNC - Chapel Hill, NC *Teaching Assistant* August 2023 - May 2024
- Assisted in grading and tutoring an undergraduate class of around 150 students.
- Conducted weekly office hours to provide support for topics on Probability and Significance Testing.
- Created course materials, including lecture slides and supplemental resources for the professor.

Home Depot, Inc. - Charlotte, NC *Head Cashier* May 2023 - August 2023, *Cashier* May 2022 - August 2022
- Demonstrated leadership by overseeing and guiding a team of cashiers.
- Assisted in inventory management by tracking sales and coordinating with store owner.
- Optimized checkout processes to reduce wait times and enhance experience for customers.

DATA ANALYTICS PROJECTS AND COMPETITIONS

Carolina Data Challenge: Predictive Analytics for NBA Spreads Using Machine Learning Spring 2024
- Developed a predictive model using **Random Forest** algorithms to analyze NBA game spread outcomes, achieving a Mean Absolute Error of 11.25, the second-highest accuracy in the class.
- Developed a custom data preprocessing pipeline in R to clean, transform, and normalize datasets over 10,000 observations from the official NBA API.

UNC Course STOR 320: Chicago Crime Data Project Spring 2023
- Directed a semester-long project analyzing crime dataset from Kaggle regarding crime in Chicago.
- Created maps using **R- Studio** to visualize crime hotspots through heatmaps and GIF animations with ggplot.
- Used Stepwise Regression methods to find that the best variables leading to arrest were the time of day and location of the crime.

UNC Hackathon: Dota 2 (Online Gaming) Draft Picker Fall 2022
- Created a **Python** based web scraping tool to extract real-time data from Dota 2, including character statistics, win rates, and game outcomes.
- Designed algorithms to analyze character combinations and select the most effective team composition.

LEADERSHIP AND VOLUNTEERING EXPERIENCE

Musical Empowerment - Chapel Hill, NC *Leading Mentor* February 2021 - May 2024
- Orchestrated successful music events, engaging children from underserved communities in Carrboro.
- Maintained open and effective communication with over 100 parents, addressing inquiries, gathering feedback, and fostering a strong parent-organization relationship.
- Gathered parent feedback using **Google Forms** and **Excel** to implement data-driven improvements, pairing students with teachers who are best fit.

TECHNICAL SKILLS

- R-Studio
- Python
- Excel
- Java