

Jianze Larry Chen

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Education

Emory University

2018-2022

GPA: 3.818/4.0

BS, Applied Mathematics

Relevant Coursework: Intro to Java 1 and 2, Linear Optimization, Nonlinear Optimization, Numerical Programming, Statistical Programming, Discrete Math and Number Theory, Calculus 1-3, Abstract Linear Algebra, Partial Differential Equations

Projects

- **Chess 2023:** Configured chess in **Python** with basic moves, check, stalemate, checkmate conditions, and legal moves highlighted using tkinter package.
 - **Blackjack 2022:** Recreated a terminal version of blackjack on windows utilizing **Java** with core functionalities implemented.
 - **Minesweeper 2022:** Developed minesweeper in **Python** with tkinter package with randomized mine placement and customizable dimensions.
 - **Calculator 2021:** Created an infix calculator in **Python** that supports PEMDAS and error detection in syntax with tkinter and numpy packages.
 - **Song and Movie Database 2021:** Constructed a database in **Java** that can query through songs and movies by metadata (length, genre, artist) and return lists matching user input set of criteria.
 - **Signature Interpolator 2020:** Created a spline approximation program in **Matlab** capable of creating a signature for any name from a set of points.
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Research

Winship Cancer Institute

May 2019 - August 2021

- **EGFR and CCR2 Inhibitors vs Head and Neck Cancer Survival:** Collaborated alongside a team of researchers in analyzing mice tumor data, genomics, proteomics, and survival data across hundreds of mice and patients to investigate effectiveness of combinatorial drugs and their plans of attack in **R**. Presented the findings at the SURE research symposium 2021.

Ecology Research and Lab for Credit

August 2021 - December 2021

- **Distribution of Insects vs Light Levels and Trail Distance:** Organized a team of 4 to analyze biodiversity data on endemic, invasive insects plaguing the ponds of Emory using principal component analysis to determine their distribution and likely breeding grounds in **R**.

Statistical Inference, Lab, and Research for Credit

August 2019 - December 2020

- **Mortality of smoking and correlations between demographics and Comorbidities:** Led a team of 3 to analyze trends and comorbidities (obesity, age, socioeconomic status) to determine correlations and susceptibilities among different demographic groups in **R**.

Math Modeling Competition

August 2019 - December 2020

- **Covid-19 Math Modeling Competition:** Implemented a predictive model of covid-19 infection and death rates over time based on previous recursive data (up to 6 months) with polynomial fits in **Matlab** with an R-squared prediction of 0.6 for covid data in the following 6 months.
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Awards

- Putnam Award 2022: Award with **\$100** cash prize given to top 10 undergraduates who score the highest on the William Lowell Putnam Exam at Emory University.
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Skills: Microsoft Office (excel, powerpoint, word), R, Java, Matlab, Python.