About Me

Overview

Below are my CV and Resume. Feel free to reach me at inhyak [at] ucla [dot] edu

Marc Andrew Choi

805-953-5002 | inhyak@ucla.edu | https://www.linkedin.com/in/marc-andrew-choi/

EDUCATION

University of California, Los Angeles — Los Angeles, CA
Bachelor of Science in Mathematics with Specialization in Computing — *Expected March 2023*
- GPA: 3.82
- College Honors
- Dean's List

RESEARCH EXPERIENCE

Gang Reduction — June 2022 – Aug 2022
UCLA CAM REU under Dr. Andrea Bertozzi — *Los Angeles, CA*
- Created and implemented various Dynamic Mode Decomposition and Natural Language Processing Algorithms (DMD/NLP) to human survey time series data to analyze trends in child development
- Research Paper submitted and accepted to IEEE International Conference on Big Data Workshop 2022

Model of Prion Diseases — April 2022 – June 2022
Math 199 under Dr. Michael Lindstrom — *Los Angeles, CA*
- Created a robust model that predicts the growth rate of Prion Diseases in human brains with asymptotic analysis

A Novel Model of Fluidity within Homeless Populations — Oct 2021 – Dec 2021
Math 199 under Dr. Michael Lindstrom — *Los Angeles, CA*
- Created a robust model that predicts the exit and entry rates of the homeless population using multithreading

INDEPENDENT STUDY

Graph Theory | *Directed Reading Program* — April 2022 – June 2022
- Worked through sections of Proofs from THE BOOK by Martin Aigner and Gunter M. Ziegler

Category Theory | *Dr. Jonathan Rubin* — June 2021 – Aug 2021
- Worked through chapters 1-2 of Category Theory in Context by Emily Riehl

Spectral Theory | *Directed Reading Program* — Jan 2021 – March 2021
- Worked through sections 1-5 of Spectral Methods in Matlab by Lloyd N. Trefethen

RELEVANT COURSEWORK

Differential Equations
- MATH 134: Linear and Nonlinear Systems of Differential Equations
- MATH 135: Ordinary Differential Equations
- MATH 266A: Applied Ordinary Differential Equations (Graduate)
- MATH 266B/C: Applied Partial Differential Equations (Graduate)

Numerical Analysis
- MATH 151A/B: Applied Numerical Methods
- MATH 269A/B/C: Advanced Numerical Analysis (Graduate)

Probability and Statistics
- MATH 170E: Introduction to Probability and Statistics: Part 1 Probability
- MATH 170S: Introduction to Probability and Statistics: Part 2 Statistics

Analysis
- MATH 131A/B: Real Analysis
- MATH 132: Complex Analysis

Algebra
- MATH 110AH/BH/C: Algebra (Honors)
- MATH 115AH/B: Linear Algebra (Honors)

Marc Andrew Choi

Los Angeles, CA | 805-953-5002 | inhyak@ucla.edu | https://www.linkedin.com/in/marc-andrew-choi/

EDUCATION

University of California, Los Angeles (UCLA) Los Angeles, CA
Bachelor of Science in Mathematics with Specialization in Computing *Expected March 2023*
- GPA: 3.82/4.0
- Dean's List and College Honors

RESEARCH EXPERIENCE

Gang Reduction Jun 2022 – Aug 2022
UCLA CAM REU under Dr. Andrea Bertozzi, Dr. Yifei Lou, and Dr. Jeffrey Brantingham *Los Angeles, CA*
- Implemented Dynamic Mode Decomposition to approximate dynamics a system representing the likelihood of joining a gang

Model of Prion Diseases Apr 2022 – Jun 2022
Math 199 under Dr. Michael Lindstrom *Los Angeles, CA*
- Created a robust model that predicts the dynamics of prion proliferation in human brains

A Novel Model of Fluidity within Homeless Populations Oct 2021 – Dec 2021
Math 199 under Dr. Michael Lindstrom *Los Angeles, CA*
- Created a robust model that predicts the exit and entry rates of the homeless population using multithreading

INDEPENDENT STUDY

Graph Theory | *Directed Reading Program* Apr 2022 – Jun 2022
- Worked through sections of Proofs from THE BOOK by Martin Aigner and Gunter M. Ziegler

Category Theory | *Dr. Jonathan Rubin* Jun 2021 – Aug 2021
- Worked through chapters 1-2 of Category Theory in Context by Emily Riehl

Spectral Theory | *Directed Reading Program* Jan 2021 – Mar 2021
- Worked through sections 1-5 of Spectral Methods in Matlab by Lloyd N. Trefethen

CAMPUS INVOLVEMENTS

Delta Sigma Pi Business Fraternity Jan 2020 – Present
Chancellor *Los Angeles, CA*
- Host recruitment events each quarter and presided over new membership deliberation process
- Create study-buddy system within the Fraternity to ensure members have at least 1 friend in each class
- Coordinate Diversity Recruitment Initiative to increase the acceptance of underrepresented applicants by over 200%

Undergraduate Mathematics Student Association Sept 2020 – Present
Mentor *Los Angeles, CA*
- Mentor 9 undergraduate mathematics students academically and professionally
- Facilitate various open studying sessions where mentees received help on various homework assignments
- Spearhead social events to strengthen relationships within the undergraduate mathematics community

MISCELLANEOUS

Math Course Grader March 2021 – Present
University of California, Los Angeles *Los Angeles, CA*
- Fall 2022: Math 33A: Linear Algebra and Applications
- Summer 2022: MATH 33B: Differential Equations & Math 115A: Linear Algebra
- Spring 2022: Math 115A: Linear Algebra & PIC 40A: Introduction to Programming for Internet
- Winter 2022: Math 61: Introduction to Discrete Structures
- Fall 2021: PIC 16A: Python with Applications I & PIC 40A: Introduction to Programming for Internet
- Summer 2021: Math 61: Introduction to Discrete Structures & Math 115A: Linear Algebra
- Spring 2021: PIC 40A: Introduction to Programming for Internet

Independent Tutor Sept 2016 – Present
Various Locations *Various Locations*
- Instruct high school and college students in mathematics for approximately 15-20 hours a week

TECHNICAL SKILLS & INTERESTS

Languages: C++, MATLAB, Python, R, Julia, Javascript, PHP, LaTeX

Interests: San Antonio Spurs, Settlers of Catan, Piano, Rick and Morty, Mahjong, Cooking, Traditional Chinese Medicine