

Ngoc Minh Quang Nguyen

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EDUCATION

Loyola University Chicago

Chicago, IL

Master of Science, Applied Statistics

August 2020 - December 2021 (Expected)

- Current GPA: 4.00/4.00

Wittenberg University

Springfield, OH

Bachelor of Science, Mathematics and Data Science

August 2017 - May 2020

- Summa Cum Laude; GPA: 3.97/4.00
- Departmental Honors in Mathematics
- Phi Beta Kappa and Pi Mu Epsilon

RESEARCH INTERESTS

Data science, supervised learning; statistical applications in sports; data visualization; reproducibility in data science; statistics and data science education; statistical consulting.

RESEARCH EXPERIENCE

Loyola University Chicago

Chicago, IL

Graduate Research Assistant

August 2020 - present

Advisor: Dr. Gregory J. Matthews

- Project: Estimating the aging curves in baseball using multiple imputation with a hierarchical structure.
- Project: Evaluating the concerns regarding the combined competition format and rank-product scoring in sport climbing through simulations and data analysis.
- Project: Statistical models for inferring the gender of stickleback fossil.

Wittenberg University

Springfield, OH

Senior Honors Thesis

August 2019 - May 2020

Advisor: Dr. Douglas M. Andrews

Title: Predictive Models of English Premier League Goal Scoring

- Determined that the Poisson process provides a good fit for modeling the time and event properties of goal scoring in the English Premier League
- Utilized Poisson regression to simulate and predict the outcomes for a Premier League season.

ACADEMIC EXPERIENCE

Loyola University Chicago, Department of Mathematics and Statistics

Chicago, IL

Instructor (Accepted Position)

January 2022 - May 2022

- Appointed as a part-time instructor for Spring 2022 semester.
- Courses: Fundamentals of Statistics (STAT 103, 2 sections)

Wittenberg University

Springfield, OH

Math Workshop Head Tutor

August 2018 - May 2020

- Tutored all levels of Mathematics and Statistics/Data Science; and introductory levels of Computer Science, Economics, and Chemistry. Worked with students one-on-one as well as in small groups.
- Coordinated annual GRE Quantitative training sessions. Created basic math skills assessment worksheets for introductory-level Statistics classes.
- Performed daily updates on student activity tracking database. Analyzed time data and fixed bad time entries.
- Assisted the director with the transition to remote tutoring and implementing new video conferencing platform.

Faculty Aide (Teaching/Research Assistant)

August 2018 - May 2020

- Provided aid to Dr. Sunny Jeong with Business courses including International Business, Business Research Methods, Global Social Entrepreneurship, and Business Ethics and Leadership.
- Updated course websites, created and graded online assignments, and compiled student grades.
- Participated in professor's research on finding new literature and resources. Developed new learning case studies and reading questions.

Clarkston Senior High School

Clarkston, MI

S.U.M. (Student Understanding Math) Assistant

January 2017 - May 2017

- Facilitated daily Algebra II lessons and assisted students with in-class materials and homework assignments.

COMPUTING SKILLS

- Techniques: data visualization, data wrangling, data mining, machine learning, statistical inference, web scraping
- Advanced knowledge: R/RStudio - tidyverse (dplyr, ggplot2), R Markdown
- Basic knowledge: Python; Java; SQL; SAS; Git/GitHub; \LaTeX

PAPERS

- **Nguyen, Q.** (2021). "Poisson Modeling and Predicting English Premier League Goal Scoring." *New England Journal of Statistics in Data Science* (To appear). [arXiv:2105.09881].
- **Nguyen, Q.**, Butler, H., Matthews, G.J. (2021). "An Examination of Sport Climbing's Competition Format and Scoring System." (Pre-print). [arXiv:2111.05310].

PRESENTATIONS & POSTERS

- Presentation. "An Examination of Sport Climbing's Competition Format and Scoring System" *Reproducible Research Competition, Carnegie Mellon Sports Analytics Conference*, November 2021. **Open Methodology Track Winner**
- Poster. "Concerns Regarding Sport Climbing Competition Format and Scoring System: Who's Suffering?" *UConn Sports Analytics Conference*, October 2021. **Student Poster Award Winner**.
- Presentation. "Poisson Modeling and Predicting English Premier League Goal Scoring." *Graduate Research Symposium, Loyola University Chicago*, March 2021.
- Presentation (pre-recorded). "Poisson Modeling and Predicting English Premier League Goal Scoring." *Midwest Sports Analytics Meeting*, November 2020.
- Poster. "Poisson Modeling and Predicting English Premier League Goal Scoring." *NextGen: Data Science Day, New England Statistical Society*, November 2020. **Poster Competition Co-Winner, Undergrad/MS Group**.
- Poster. "Poisson Modeling and Predicting English Premier League Goal Scoring." *Carnegie Mellon Sports Analytics Conference*, October 2020.
- Poster. "Poisson Modeling and Predicting English Premier League Goal Scoring." *UConn Sports Analytics Conference*, October 2020.

HONORS & AWARDS

- **Reproducible Research Competition Winner**, Open Methodology Track, Carnegie Mellon Sports Analytics Conference (CMSAC), 2021.
- **Best Student Poster Award**, UConn Sports Analytics Symposium (UCSAS), 2021
- **Poster Competition Co-Winner**, Undergrad/MS Group, New England Statistical Society (NESS) - NextGen: Data Science Day, 2020
- **Merit Award**, MS in Applied Statistics Program, Loyola University Chicago, 2020-2021.
- **Summa Cum Laude**. Graduated with the highest distinction, Wittenberg University, 2020.
- **Departmental Honors in Mathematics**, Department of Mathematics and Computer Science, Wittenberg University, 2020.
- **Phi Beta Kappa**, Omicron of Ohio Chapter, Wittenberg University, 2020.
- **Pi Mu Epsilon**, Ohio Upsilon Chapter, Wittenberg University, 2020.
- **The Charles and Elsie Little Mathematics Award**, Department of Mathematics and Computer Science, Wittenberg University, 2020
 - Awarded to the most outstanding senior mathematics and data science majors.
- **Pick and Pen**, Wittenberg University, 2019.
- **Mathematics 202 Award**, Department of Mathematics and Computer Science, Wittenberg University, 2018.
 - Awarded to an outstanding first-year student in the introductory calculus sequence.
- **Textbook Award**, Department of Mathematics and Computer Science, Wittenberg University, 2018.
 - Awarded to first-year students majoring in the Department of Mathematics and Computer Science.
- **Phi Eta Sigma**, Wittenberg University, 2018.
- **Dean's List**, Wittenberg University, Fall 2017 - Spring 2020 (all semesters).
- **International Student Scholarship** and **International Student Grant Program**, Wittenberg University, 2017-2020

COURSEWORK

Graduate

Loyola University Chicago

Statistics (* In progress)

Current GPA: 4.00/4.00

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|------------------------------------------------------|-----------------------------------------|
| • Predictive Analytics* | • Nonparametric Statistics |
| • Statistical Computation and Simulation* | • Categorical Data Analysis |
| • Statistical Consulting* | • Probability & Mathematical Statistics |
| • Statistical Design and Analysis of Experiments* | • Applied Regression Analysis |
| • Advanced Statistical Inference (Independent Study) | • SAS Programming & Applied Statistics |

Undergraduate

Wittenberg University

Statistics/Data Science

Major GPA: 4.00/4.00

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|---------------------------------------|-----------------------------------------|
| • Mathematical Statistics | • Computer Programming II with Java |
| • Univariate Probability | • Computer Programming I with Python |
| • Statistical Modeling | • Databases |
| • Introduction to Data Science with R | • Introductory Statistics/Data Analysis |

Mathematics

Major GPA: 4.00/4.00

- Graph Theory
- Real Analysis
- Abstract Algebra
- Linear Algebra
- Multivariable Calculus
- Differential Equations
- Foundations of Geometry
- Discrete Mathematics & Proofs
- Calculus II
- Calculus I

MEDIA

- "Can you pick the AFL's Brownlow Medal winner without knowing the first thing about Australian rules?"
<https://www.abc.net.au/news/2021-09-19/afl-trying-to-predict-the-2021-brownlow-medal-winner/100472246>

DATA COMPETITIONS

2021 Humana-Mays Healthcare Analytics Case Competition Texas A&M University, Mays Business School
 Round 1 (Prediction Accuracy and Fairness) Place: 2/75

SLICED Kaggle Competition
 Season 1, Episode 9 - 2021 Place: 1/23 (Audience participation)
 Season 1, Episode 10 - 2021 Place: 2/27 (Audience participation)

ACTIVITIES

Wittenberg University Springfield, OH
 International Orientation Assistant 2018 & 2019
 Witt Math Club, Secretary and Chair of Contest Recruitment 2018-2020
 Trivia Night Host 2020
 East Asian Studies Club 2019
 American International Association 2017

COMMUNITY SERVICE

The Fuller Center for Housing Americus/Albany, GA
 Wittenberg University's Service Immersion Spring Break Trip 2019

LANGUAGES

Bilingual: **Vietnamese** (native language) and **English** (proficient)

EXCHANGE PROGRAMS

Clarkston Senior High School Clarkston, MI
 Educatius Group, US F-1 Academic Exchange Program 2016-2017
Lead Hill High School Lead Hill, AR
 Cultural Academic Student Exchange (CASE) 2015-2016