

# Ngoc Minh Quang Nguyen

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## EDUCATION

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**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

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Supervised learning; statistical applications in sports; data visualization; reproducibility in data science; statistics and data science education; statistical consulting.

## RESEARCH EXPERIENCE

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**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

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**Loyola University Chicago, Department of Mathematics and Statistics**

Chicago, IL

**Adjunct Instructor** (Accepted Position)

January 2022 - May 2022

- Appointed as an adjunct instructor for Spring 2022 semester.
- Courses: Fundamentals of Statistics (STAT 103) and Precalculus I (MATH 117)

## 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

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- 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

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- **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

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- 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

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- **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

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### 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

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- "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

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<b>2021 Humana-Mays Healthcare Analytics Case Competition</b>	Texas A&M University, Mays Business School
Round 1 (Prediction Accuracy and Fairness)	Place: 2/75
<b>SLICED</b>	Kaggle Competition
Season 1, Episode 9 - 2021	Place: 1/23 (Audience participation)
Season 1, Episode 10 - 2021	Place: 2/27 (Audience participation)

## ACTIVITIES

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<b>Wittenberg University</b>	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

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

## LANGUAGES

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

## EXCHANGE PROGRAMS

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