




# Ngoc Minh Quang Nguyen

Department of Statistics & Data Science, Carnegie Mellon University

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## EDUCATION

<b>Carnegie Mellon University</b> PhD, Statistics & Data Science	2022 – present
<b>Loyola University Chicago</b> MS, Applied Statistics	2020 – 2021
<b>Wittenberg University</b> BS, Mathematics & Data Science	2017 – 2020

## INTERESTS

applied statistics; data science; graphics and visualization; machine learning; networks; open source software; reproducible research; sports analytics; tracking data

## RESEARCH EXPERIENCE

<b>Carnegie Mellon University</b> Advanced Data Analysis Project (Advisor: Nynke Niezink)	2023 – present
<b>Loyola University Chicago</b> Graduate Research Assistant (Advisor: Gregory J. Matthews)	2020 – 2021
<b>Wittenberg University</b> Senior Honors Thesis Research (Advisor: Douglas M. Andrews)	2019 – 2020

## ACADEMIC EXPERIENCE

<b>Carnegie Mellon University</b> Teaching Assistant	
36-468/668: Text Analysis	Fall 2023
Carnegie Mellon Sports Analytics Camp (CMSACamp)/ Summer Undergraduate Research Experience (SURE)	Summer 2023
36-402/608: Advanced Methods for Data Analysis	Spring 2023
36-401/607: Modern Regression	Fall 2022
<b>Loyola University Chicago</b> Instructor	
STAT 103: Fundamentals of Statistics (3 sections)	Spring 2022
<b>Wittenberg University</b> Math Workshop Head Tutor	2018 – 2020
Faculty Aide	2018 – 2020
<b>Clarkston Senior High School</b> S.U.M. (Student Understanding Math) Assistant	2017

## PUBLICATIONS

### Journal Articles

Q. Nguyen, R. Yurko, G. J. Matthews. Here Comes the STRAIN: Analyzing Defensive Pass Rush in American Football with Player Tracking Data. *The American Statistician*. 2023+. doi: [10.1080/00031305.2023.2242442](https://doi.org/10.1080/00031305.2023.2242442);

[arXiv: 2305.10262](https://arxiv.org/abs/2305.10262).

B. S. Baumer, G. J. Matthews, **Q. Nguyen**. Big Ideas in Sports Analytics and Statistical Tools for their Investigation. *Wiley Interdisciplinary Reviews: Computational Statistics*. 2023+. doi: [10.1002/wics.1612](https://doi.org/10.1002/wics.1612); arXiv: [2301.04001](https://arxiv.org/abs/2301.04001).

**Q. Nguyen**, H. Butler, G. J. Matthews. An Examination of Olympic Sport Climbing Competition Format and Scoring System. *Journal of Data Science* **20**(2), 156–167, 2022. doi: [10.6339/22-JDS1042](https://doi.org/10.6339/22-JDS1042); arXiv: [2111.05310](https://arxiv.org/abs/2111.05310).

**Q. Nguyen**. Poisson Modeling and Predicting English Premier League Goal Scoring. *New England Journal of Statistics in Data Science* **1**(1), 95–101. 2023. doi: [10.51387/21-NEJSDS1](https://doi.org/10.51387/21-NEJSDS1); arXiv: [2105.09881](https://arxiv.org/abs/2105.09881).

### Submitted

**Q. Nguyen**, G. J. Matthews. Filling the Gaps: A Multiple Imputation Approach to Estimating Aging Curves in Baseball. 2023. (Under review.) arXiv: [2210.02383](https://arxiv.org/abs/2210.02383).

### Other

G. J. Matthews, **Q. Nguyen**. STRAIN: Sacks, Tackles, Rushing, Aggression INdex. 2023 NFL Big Data Bowl. <https://www.kaggle.com/code/statsinthewild/strain-sacks-tackles-rushing-aggression-index>

B. S. Baumer, **Q. Nguyen**, G. J. Matthews. CRAN Task View: Sports Analytics. The Comprehensive R Archive Network. 2022. <https://cran.r-project.org/web/views/SportsAnalytics.html>

## SELECTED PRESENTATIONS

### Invited

**Q. Nguyen**, R. Yurko, G. J. Matthews. Here Comes the STRAIN: Analyzing Defensive Pass Rush in American Football with Player Tracking Data. *New England Symposium on Statistics in Sports*. September 2023.

#### Featured talk

G. J. Matthews, **Q. Nguyen**. STRAIN: Sacks, Tackles, Rushing, Aggression INdex. *2023 NFL Big Data Bowl Final*. March 2023.

#### Finalist (Top 8; \$10,000 prize)

**Q. Nguyen**, G. J. Matthews. Estimating Aging Curves: Using Multiple Imputation to Examine Career Trajectories of MLB Offensive Players. *Carnegie Mellon Sports Analytics Conference*. October 2022.

#### 3rd Place, Open Methodology Track, Reproducible Research Competition

**Q. Nguyen**, H. Butler, G. J. Matthews. An Examination of Olympic Sport Climbing Competition Format and Scoring System. *Cascadia Symposium on Statistics in Sports*. September 2022.

**Q. Nguyen**, H. Butler, G. J. Matthews. An Examination of Sport Climbing's Competition Format and Scoring System. *Carnegie Mellon Sports Analytics Conference*. November 2021.

#### Winner, Open Methodology Track, Reproducible Research Competition

### Posters

**Q. Nguyen**, H. Butler, G. J. Matthews. Concerns Regarding Sport Climbing Competition Format and Scoring System: Who's Suffering? *UConn Sports Analytics Conference*. October 2021.

#### Winner, Student Poster Award.

**Q. Nguyen**. Poisson Modeling and Predicting English Premier League Goal Scoring. *NextGen: Data Science Day - New England Statistical Society*. November 2020.

#### Co-Winner, Poster Competition, Undergrad/MS Group.

**Q. Nguyen**. Poisson Modeling and Predicting English Premier League Goal Scoring. *Carnegie Mellon Sports Analytics Conference*. October 2020.

**Q. Nguyen.** Poisson Modeling and Predicting English Premier League Goal Scoring. *UConn Sports Analytics Conference*. October 2020.

### Workshops

**Q. Nguyen.** Big Data Bowl Workshop. *Carnegie Mellon Sports Analytics Conference*. November 2023.

## HONORS & AWARDS

<b>University of Toronto Sports Analytics Group (UTSPAN) Scholarship</b>	2022
Cascadia Symposium on Statistics in Sports (CASSIS) 2022	
<b>Merit Award</b>	2020 – 2021
MS in Applied Statistics Program, Loyola University Chicago	
<b>Summa Cum Laude</b>	2020
Graduated with the highest distinction, Wittenberg University	
<b>Departmental Honors</b>	2020
Department of Mathematics and Computer Science, Wittenberg University	
<b>Phi Beta Kappa</b>	2020
Omicron of Ohio Chapter, Wittenberg University	
<b>Pi Mu Epsilon</b>	2020
Ohio Upsilon Chapter, Wittenberg University	
<b>The Charles and Elsie Little Mathematics Award</b>	2020
Department of Mathematics and Computer Science, Wittenberg University Awarded to the most outstanding senior majoring in mathematics and data science	
<b>Pick and Pen</b>	2019
Wittenberg University	
<b>Mathematics 202 Award</b>	2018
Department of Mathematics and Computer Science, Wittenberg University Awarded to an outstanding first-year student in the introductory calculus sequence	
<b>Textbook Award</b>	2018
Department of Mathematics and Computer Science, Wittenberg University	
<b>Phi Eta Sigma</b>	2018
Wittenberg University	
<b>Dean's List</b>	All semesters; 2017 – 2020
Wittenberg University	

## SKILLS

Computing: R/RStudio (expert); Python, SQL, SAS, Git/GitHub (basic)

Typesetting: markdown, L<sup>A</sup>T<sub>E</sub>X (proficient)

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

## SERVICES

<b>Reviewer</b>	2022, 2023
Journal of Quantitative Analysis in Sports	
<b>Mentoring</b>	2022
Women in Data Science (WiDS) Chicago Datathon	

## Statistical Consulting

Loyola University Chicago

2021–2022

Clients: Stritch School of Medicine; Department of Biology; City of Milwaukee Assessor's Office

## MEDIA

An Examination of Sport Climbing with Quang Nguyen

2022

Open Source Sports Podcast, Episode IX Guest

<https://anchor.fm/open-source-sports/episodes/An-Examination-of-Sport-Climbing-with-Quang-Nguyen-e1inj9>

Viz Buzz

2022

Episodes 2, 3, 4, 5 Contestant (Episodes 3 & 4 Lap Winner)

[https://youtube.com/playlist?list=PL2rVQ3cmgOyx\\_CdtKOA0oX2pikOcc\\_xu-](https://youtube.com/playlist?list=PL2rVQ3cmgOyx_CdtKOA0oX2pikOcc_xu-)

Can you pick the AFL's Brownlow Medal winner without knowing the first thing about

2021

Australian rules?

ABC News (Australia)

<https://www.abc.net.au/news/2021-09-19/afl-trying-to-predict-the-2021-brownlow-medal-winner/100472246>

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