


Ngoc Minh Quang Nguyen

Department of Statistics & Data Science, Carnegie Mellon University

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EDUCATION

Carnegie Mellon University PhD, Statistics & Data Science	2022 – present
Loyola University Chicago MS, Applied Statistics	2020 – 2021
Wittenberg University 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

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

ACADEMIC EXPERIENCE

Carnegie Mellon University Teaching Assistant Carnegie Mellon Sports Analytics Camp (CMSACamp)/ Summer Undergraduate Research Experience (SURE) 36-402/608: Advanced Methods for Data Analysis 36-401/607: Modern Regression	Summer 2023 Spring 2023 Fall 2022
Loyola University Chicago Instructor STAT 103: Fundamentals of Statistics (3 sections)	Spring 2022
Wittenberg University Math Workshop Head Tutor Faculty Aide	2018 – 2020 2018 – 2020
Clarkston Senior High School 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](#); arXiv: [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 in 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.

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.

HONORS & AWARDS

University of Toronto Sports Analytics Group (UTSPAN) Scholarship Cascadia Symposium on Statistics in Sports (CASSIS) 2022	2022
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 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 Awarded to the most outstanding senior majoring in mathematics and data science	2020
Pick and Pen Wittenberg University	2019
Mathematics 202 Award Department of Mathematics and Computer Science, Wittenberg University Awarded to an outstanding first-year student in the introductory calculus sequence	2018
Textbook Award Department of Mathematics and Computer Science, Wittenberg University	2018
Phi Eta Sigma Wittenberg University	2018
Dean's List Wittenberg University	All semesters; 2017 – 2020

SKILLS

Computing: R/RStudio (expert); Python, SQL, SAS, Git/GitHub (basic)
Typesetting: markdown, \LaTeX (proficient)
Bilingual: Vietnamese (native language) and English (proficient)

SERVICES

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

MEDIA

An Examination of Sport Climbing with Quang Nguyen Open Source Sports Podcast, Episode IX Guest https://anchor.fm/open-source-sports/episodes/An-Examination-of-Sport-Climbing-with-Quang-Nguyen-etinj9	2022
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Viz Buzz	2022
Episodes 2, 3, 4, 5 Contestant (Episodes 3 & 4 Lap Winner)	
https://youtube.com/playlist?list=PL2rVQ3cmgOyx_CdtKOAOoX2pikOcc_xu-	
Can you pick the AFL's Brownlow Medal winner without knowing the first thing about Australian rules?	2021
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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