

Torre Caparatta, Ph.D.

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Work Experience

Statistician/Data Scientist

February 2026 -

Present

UNC Health Care, ISD - Enterprise Analytics and Data Sciences

- Designs and develops enterprise-class, advanced analytic models to understand and solve complex business problems. Creates models by analyzing large data sets from various sources and processes.
- Establishes scalable, efficient, automated processes for large scale data analyses and model development, validation, and implementation.
- Ensures consistent, meaningful reporting and output formatting across all deliverables.
- Develops and documents technical designs such as Entity-Relationship Diagrams (ERD), data flow diagrams, component diagrams, architecture design documents, etc.
- Drafts and presents analytic proposals, designs and solutions to client stakeholders crafted to address both recognized and unrecognized needs and opportunities that are grounded in domain knowledge.
- Interfaces with relevant stakeholders to assist in lifecycle activities such as requirements gathering, research activities, and solution architecture and design.
- Organizes methods, plans, and data constructs for effective clinical and business analyses.

Adjunct

August 2025 -

Present

UNC Greensboro, Department of Mathematics and Statistics, Greensboro, NC

- Design and deliver comprehensive lesson plans and course materials for undergraduate level courses
- Contribute in developing new courses to enhance undergraduate understanding of mathematical topics

Data Scientist

May 2024 -

January 2026

Old Dominion Freight Line, Operational Engineering and Technology, Thomasville, NC

- Built a truck rotational model in Python/SQL, reducing projected fleet costs by 40%.
- Developed a mileage prediction model that uncovered \$14M in avoidable truck repair costs.
- Validated business logic of new Special Routing tool pre/post-launch to ensure accurate automation.
- Lead cross-team integration of Optym HaulPlan routing software, including BRDs and UAT testing.
- Define data flows and ensure reporting accuracy for a new yard truck assignment app.
- Deliver executive dashboards and insights via Python and Qlik Sense visualizations.

Adjunct

August 2023 - February

2024

Elon University Department of Mathematics and Statistics, Elon, NC

- Tailor instruction to undergraduate students on various statistical methods
- Utilize a range of tools for analyzing datasets, including Excel, StatCrunch, and others
- Reinforce students in comprehending statistical graphs and identifying optimal solutions for problems
- Fulfill comprehensive support to students across a range of statistical projects

Graduate Teaching Assistant

August 2019 - May

2024

UNC Greensboro, Department of Mathematics and Statistics, Greensboro, NC

- Design and deliver comprehensive lesson plans and course materials for undergraduate level courses
- Contribute in developing new courses to enhance undergraduate understanding of mathematical topics
- Participate actively in statistical consulting sessions within the Statistical Consulting Center
- Served as a committee member for prestigious math conferences held at UNCG
- Fulfill the role of Graduate Senator, providing assistance and support to fellow graduate students

Web Assistant

May 2023 -

July 2023

UNC Greensboro, School of Health and Human Sciences, Greensboro, NC

- Migrated web content to a new format, ensuring seamless transition and improved user experience
- Developed and designed web pages on WordPress, adapting to accommodate existing content
- Utilized Photoshop to edit and enhance images, ensuring high-quality visuals
- Conducted thorough quality checks on both existing and new content to ensure accuracy to brand standard

Teaching Assistant/Grader

January 2018 - May 2019

UNCG Department of Mathematics and Statistics, Greensboro, NC

- Supervised the Math Emporium Lab where students are responsible to complete the online portion of the class
- Assisted students to understand multiple mathematical concepts in various types of classes

Aquatics Program Assistant of Operations

May 2018 - May

2019

UNCG Department of Recreation & Wellness, Greensboro, NC

- Provided operational and administrative assistance to the Aquatics Coordinator and Graduate Assistant
- Created skill clinic scripts to assist lifeguard instructor during classes taught for employee's CPR skills
- Assisted with hiring and training of lifeguard staff, including new hire orientation

Skills

Python (Proficient) | R (Proficient) | Microsoft Azure (Proficient) | Microsoft Office Suite (Proficient) | SQL (Proficient) | Qlik Sense (Proficient) | WordPress (Proficient) | Julia (Competent) | Microsoft Power BI (Advanced Beginner) | Tableau (Advanced Beginner) | Photoshop (Advanced Beginner)

Education

The University of North Carolina at Greensboro (UNC Greensboro)

Ph.D. Computational Mathematics **GPA 3.66**

August 2019 - May 2024

Post-Baccalaureate Certificate (PBC) in Statistics

August 2019 - December 2023

M.A Mathematics **GPA 3.66**

August 2019 - December

2022

B.S. Mathematics **Minor** American Sign Language Deaf Studies **GPA 3.46**

August 2016 - May 2019

Certifications

- Cosmos for Data Scientist, Epic July 2026
- Cosmos Data Model, Epic July 2026
- Clarity Data Model, Epic March 2026
- Cogito, Epic March 2026
- Caboodle Data Model, Epic March 2026
- Generative AI Professional Certificate by Snowflake December 2025

- PCAP - Certified Associate Python Programmer, Python Institute
2025 *October*
- Microsoft Certified: Azure Data Scientist Associate, Microsoft
2025 *June*
- Qlik Sense Business Analyst Certificate, Qlik
June 2025
- Machine Learning Specialization Certificate, DeepLearning.AI, Stanford University
2024 *January*
- IBM Data Science Professional Certificate, Coursera
2023 *January*
- Google Data Analytics Certificate, Coursera
December 2022

Seminar and Conference Presentations

- Triangle Area Graduate Mathematics Conference (NC State)
2023
- Southern Regional Number Theory Conference (Louisiana State University)
2023
- Algebra, Combinatorics, Topology, Geometry, and Number Theory seminar (UNCG)
2022
- UNCG Regional Mathematics and Statistics Conference (UNCG)
2022
- Palmetto Number Theory Series XXXV (University of South Carolina)
2022
- Algebra, Combinatorics, Topology, Geometry, and Number Theory seminar (UNCG)
2021

Papers

- Caparatta, T., Pauli, S., & Saidak, F. (2024). Zeros of Fractional Derivatives of Polynomials. *Experimental Mathematics*, 1–19. <https://doi.org/10.1080/10586458.2024.2382362>

Courses Taught

UNC Greensboro

- STA 108 - Elementary Introduction to Probability Staticists
Spring 2026 *Fall 2025,*
- MAT 112 - Contemporary Mathematics
2025 *Fall*
- MAT 310 - Linear Algebra
Spring 2023
- MAT 191 - Calculus I
Spring 2021
- MAT 190 - Precalculus
2023 *Spring 2022, Fall 2022, Spring 2023, Fall*
- MAT 181 - Calculus I Support Course
2021 *Fall 2019, Spring 2020, Fall*
- MAT 118 - Business Algebra
Summer 2022 *Fall 2021,*

Elon University

- MTH Applied Calculus
2024 *Winter*
- STS 1100- Intro to Statistical Reasoning (Elon University)
2023 *Fall*

Volunteer and Service

- AI Symposium West at UNC Health
2026
- Panel member for first year College students at UNCG
2023, 2026 2021, 2022,
- Graduate Senator
2023,2024
- Secretary for AMS Chapter at UNCG 2023
- Graduate Senator at UNCG
2023
- Co-organizer, SERMON at UNCG
2023
- Host for Math Help Center information desk at UNCG
2023
- Session host at UNCG, Regional Mathematics and Statistics Conference (RMSC) 2022
- Camp Counselor/Guest Speaker, Shiloh Family Ministries: Camp Kerr Lake 2011-2022



Awards

- UNCG Student Undergraduate Employee of the Year 2019
- UNCG Department of Recreation and Wellness Above and Beyond Award 2019
- Vielhauer Scholarship 2018 - 2019
- Vicky Langley Math Scholarship 2018 - 2019
- Dean Scholarship 2016 - 2019