

# Nicholas Taylor

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## Education

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July 2023 - Present	<b>Baylor University</b> <i>PhD in Statistics</i> <i>Expected graduation: 2027</i>
Aug 2021 - May 2023	<b>Texas Tech University</b> <i>MS in Mathematics</i>
Aug 2018 - May 2021	<b>University of Mary Hardin-Baylor</b> <i>BS in Mathematics, minor in Computer Science</i> <i>Summa Cum Laude</i>

## Work Experience

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July 2023 - Present	<b>Baylor University</b> <i>Graduate Instructor of Record</i> <ul style="list-style-type: none"><li>Fall 2024- STA 1380 Introduction to Statistics</li></ul> <i>Graduate Assistant: Supplemental Instructor &amp; Teaching Assistant</i> <ul style="list-style-type: none"><li>Fall 2022 &amp; Spring 2023 - STA 1380 Introduction to Statistics - Supplemental Instructor</li></ul>
Aug 2021 - May 2023	<b>Texas Tech University</b> <i>Graduate Instructor of Record</i> <ul style="list-style-type: none"><li>Fall 2022 - MATH 1330 116 Introductory Mathematical Analysis I</li><li>Spring 2023 - MATH 2360 012 Linear Algebra</li><li>Spring 2023 - MATH 2360 021 Linear Algebra</li></ul> <i>Teaching Assistant</i> <ul style="list-style-type: none"><li>Fall 2021 - MATH 2450 Calculus III with Applications - Teaching Assistant</li><li>Spring 2022 - MATH 3360 Foundations of Algebra I - Grader</li><li>Summer 2022 - Department Tutor</li></ul>
Jan 2019 - May 2021	<b>University of Mary Hardin-Baylor</b> <i>Department of Mathematics Tutor</i> Assisted students in understanding a variety of topics such as statistics, algebra, and calculus.
Aug 2017 - May 2018	<b>Texas A&amp;M University Recreation Center</b> <i>Weight Room Attendant</i> Monitored weight room area and maintained equipment and machines.

## Organizations & Honors

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- Delta Psi Theta Math Club
  - Spring 2020 - Treasurer
  - Fall 2020 - Secretary
- Gamma Beta Phi Society
- Kappa Mu Epsilon National Mathematics Honor Society
- Alpha Chi National College Honor Society
- The Honor Society of Phi Kappa Phi

## Projects

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2023 | **Masters Report**  
*Neural Networks in Machine Learning: Comparing Activation Functions*  
Advisor: Dr. Lourdes Juan

2021 | **Undergraduate Thesis**  
*Bootstrap-based Error Rate Estimators for the Linear Discriminant function*  
Advisor: Dr. Peter Chen  
*Presented at the 2021 Annual Meeting of the Texas Section of the MAA*

- Awarded “Best Presentation in Applied Mathematics, Probability and Statistics”

In this presentation we propose a novel estimator of the conditional error rate (CER) for the linear discriminant function created using parametric double bootstrapping. We begin the presentation by discussing Anderson’s linear discriminant function, defining CER estimators, and explaining parametric double bootstrapping. Using Monte Carlo simulations, we demonstrate that this CER estimator outperforms other currently-available estimators when the Mahalanobis distance between classification groups and the training sample sizes are small.

## Skills

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- Coding experience in Python, Java, C++, HTML, R, Maple, MATLAB, and LaTeX.
- Experience with Microsoft Word, Powerpoint, and Excel.

## Study Abroad & Conferences

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- “History of Mathematics” course study abroad trip to Athens, Greece and Florence, Italy
- 2019 Gulf State Math Alliance Conference
- 2021 Annual Meeting of the Texas Section of the MAA

## Sports

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Jan 2022 - Jan 2023 | **Texas Tech University Powerlifting Club**

Aug 2018 - Feb 2021 | **University of Mary Hardin-Baylor Football Team**  
*2018 NCAA Division III National Champions*

Aug 2016 - Jan 2018 | **Texas A&M Powerlifting Team**