

Nina Minicozzi '27

Dartmouth Athletic Department Internship Spring 2025

During 25S, I was able to use Byrne Scholar funds to sponsor a data science internship in the Dartmouth athletic department. Specifically, I worked with student-athlete data from VALD Performance ForceDecks (a training tool that measures a variety of performance metrics, including athlete jump height, peak power, concentric impulse, and force at zero velocity) to create an interactive RShiny app that would easily allow coaches to view the progression of their athletes in the different performance metrics. I combined magnitude-based inference with more traditional statistical methods to quantify progression and measure both whether or not and the degree to which each athlete improved, declined, or remained stagnant throughout the selected time period. I presented my progress to the coaches weekly, adapting the app to their feedback and adding functionality to allow comparisons across athletes, seasons, and performance metrics.

This was an incredibly valuable experience for me. I learned new statistical methods, gained experience coding in R, and learned how to work with "customers" (the coaches) to successfully execute their vision. It also allowed me to stay at Dartmouth during my off-term and reap the full benefits of what the campus has to offer. Thank you to the Byrne Family for making this experience possible!