



## Madison George

Ph.D. Student in Bioengineering, admitted Autumn 2023

### Bio

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#### BIO

A life-long athlete, I am strongly influenced by my background as a D1 pole vaulter and hope to effect change in the way we diagnose injuries and enhance sport performance. My hometown is Scottsdale, AZ and I graduated from Elon University ('23) with a BS in Engineering (conc. biomedical engineering) and a minor in exercise science. My undergraduate thesis was an interdisciplinary research and development project leading to the design of the first women's pole vaulting shoes. Now, I hope to improve musculoskeletal imaging to evaluate movement and accurately diagnose injuries.

#### HONORS AND AWARDS

- Barry Goldwater Scholarship, The Barry Goldwater Scholarship and Excellence in Education Foundation (March 2022)
- Lumen Prize, Elon University (April 2021)
- Honors Fellows Program, Elon University (April 2019 - May 2023)
- CAA Female Scholar-Athlete of the Year, The Coastal Athletic Association (April 2023)
- CAA Institutional Scholar-Athlete of the Year, Elon University (April 2023)
- CAA Leadership and Sport Excellence Award, The Coastal Athletic Association (June 2022, June 2023)
- A.L. Hook Scholar Athlete Award, Elon University (May 2022, May 2023)
- Engineering Research Award, Elon University (May 2023)
- Student Speaker at the Elon LEADS Celebration, Elon University (April 2023)
- Student Speaker at the Night of the Phoenix, Elon University (October 2022)
- Jerry and Jeanne Robertson Women's Track and Field Scholarship, Elon University (August 2021, August 2022)
- Phi Eta Sigma Honor Society, Phi Eta Sigma (November 2020)
- Pi Mu Epsilon Honor Society, North Carolina Nu Chapter (April 2022)
- Phi Kappa Phi Honor Society, Phi Kappa Phi (March 2022)

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

With my research I bridge the most prominent aspects of my life: academics and athletics. In my undergraduate experience, I completed a co-mentored interdisciplinary thesis to design the first women's pole vaulting shoes. I performed studies of pole vaulter foot biomechanics, mechanical evaluations of shoes, and shoe materials analyses. Now, I am committed to improving biomedical imaging for musculoskeletal injury diagnoses, specifically dynamic imaging to create 3D models of areas of the musculoskeletal system and evaluate movement and function. My primary goals are to enhance performance and properly diagnose injuries.

## Publications

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### PUBLICATIONS

- **No Space? No Problem. Accessible Balance Control Using VR Player Movement** *Systems and Information Engineering Design Symposium (SIEDS)*  
George, M. K., Roveri, A. D., Weitz, A. S., Azan, A. N., Ogunmola, C. T., Pluer, W. T., Wittstein, M. W.  
2023: 4