

Emaly Vatne

Columbus, OH | Sterling Heights, MI

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EDUCATION

The Ohio State University

Ph.D. Kinesiology

Projected: 2026

Specialization: Health and Exercise Science

Graduate Minor: Statistical Data Analysis

Dissertation Topic: {Psychophysiological Effects of Recovery Strategies in Soccer}

M.S. Kinesiology

2023

Specialization: Health and Exercise Science

Thesis Topic: {Season-Long Athlete Monitoring in Collegiate Women's Ice Hockey}

B.S. Exercise Science

2021

Undergraduate Minor: Human Nutrition

Cum Laude

PROFESSIONAL EXPERIENCE

The Ohio State University

Graduate Research Associate and Assistant Sport Scientist

2022 – Present

Human Performance Collaborative and Ohio State Department of Athletics

- Clean and prepare data sets from 1000+ varsity athletes and 10+ sports performance technologies, then provide statistical analysis using **R**, **Python**, and **JMP** and visualizations using **RShiny**, **Streamlit**, and **Smartabase** for coaches, practitioners, athletes and other stakeholders of the athletics department
- Assist day-to-day athlete monitoring strategies for varsity sports within the department of athletics by ensuring data quality, appropriate technology implementation, and dissemination of information to coaches, support staff, and athletes
- Lead research projects by investigating datasets that are collected as a part of standard operations and other sport science initiatives under the direction of Dr. Josh Hagen, Ph.D

Ohio National Guard and National Guard Bureau

X-Force Fellow in Data Engineering and Data Science Research

May – August 2023

National Security Innovation Network

- Researched data ecosystem approaches to handle datasets related to the Holistic Health and Fitness (H2F) system from the National Guard of all 54 states and territories
- Created a prototype PowerBI dashboard for soldiers to view their historical and predict future Army Combat Fitness Test scores
- Conceptualized a modern data architecture with the Microsoft Enterprise that was presented to Senior Leaders of the National Guard Bureau in Washington, D.C.

Orlando City Soccer Club

Data Analytics Intern

January – May 2023

Department of Analytics

- Cleaned and analyzed datasets from a season of games that each include 300000+ rows from optical soccer tracking technologies to objectively assist and inform technical staff
- Created an RShiny App to be deployed on the club's ShinyProxy server as a Docker image to continue to support OCSC staff
- Provided a literature review that describes the burgeoning area of contextualizing external load using technical tracking and event data in elite soccer

The Ohio State University

Undergraduate Research Assistant

January 2021 – December 2022

MOvES Lab

- Handled data collection and analysis from kinematic (Vicon, Theia, HumanTrak) and kinetic (Bertec, VALD, Hawkin Dynamics) measurement tools for sports medicine research under the direction of Dr. James Onate, Ph.D, AT, ATC
- Completed literature reviews and assisted with drafting scholarly manuscripts

Women in Sports Tech and Perch

Fellow and Data Science Intern

May – August 2022

- Processed velocity-based training data using Python and R to measure bilateral imbalances and key performance indicators
- Contributed to the development of presentations that demonstrated trends and insights to various professional sports organizations

The Ohio State University

Undergraduate Strength and Conditioning Intern

Ohio State Department of Athletics

May – August 2021

- Observed and assisted day-to-day operations of the strength and conditioning coaches that work with The Ohio State University varsity women's basketball team
- Contributed to the development of presentations that demonstrated trends and insights to various professional sports organizations

SCHOLARSHIP

Peer-Reviewed Published Articles

1. **Vatne, E.**, Saenz, C., Merrigan, J., Stone, J., Kraemer, W., Hagen, J. Effects of Daytime Floatation-REST on Nocturnal Cardiovascular Physiology, Sleep, and Subjective Recovery in Collegiate Student-Athletes: A Comprehensive Observational Study. *JSCR. In-Press. (2023)*
2. **Vatne, E.**, Dial, M., Vatne, M., Merrigan, J., Stone, J., Hagen, J. Relationship between sleep and nocturnal cardiovascular physiology and swim performance in collegiate athletes. *JSCR. In-Press (2023)*.

3. Merrigan, J., **Vatne, E.**, Stone, J., Hagen, J. Are countermovement jump force plate metrics associated with musculoskeletal injury risk in NCAA Division-I American football? *Plos ONE. In-Press (2023)*
4. Abdullah, M., Yazbeck, M., Alhanouti, S., Talebi, A., **Vatne, E.**, Hagen, J., Krening, S. Perfect Short Reveal: Human-Centered Machine Learning Approach in Analyzing Goal-Scoring Strategies in Soccer. *International Journal for Sports Sciences and Coaching. In-Press (2023)*.
5. **Vatne, E.**, Vatne, M., Dial, M., Saenz, C., Merrigan, J., Stone, J., Kraemer, W., Hagen, J. Normative Values for Sleep in NCAA Collegiate Athletes. *JSCR. In-Press. (2023)*
6. Merrigan, J., Stone, J., Kraemer, W., Friend, C., Lennon, K., **Vatne, E.**, Hagen, J. Analysis of Sleep, Nocturnal Physiology, and Physical Demands of NCAA Women's Ice Hockey Across a Championship Season. *JSCR. Accepted (2023)*
7. Merrigan, J., Stone, J., Kraemer, W., **Vatne, E.**, Hagen, J. Identifying Force Plate Metrics Associated with Injury Risk in NCAA Division-I Female Athletes. *JSCR. Accepted. (2023)*

Peer-Reviewed Published Research Abstracts

1. **Emaly Vatne**, Catherine Saenz, Josh Hagen. (2023) Comparison of Subjective Feedback Towards Wet versus Dry Floatation-Restricted Environmental Stimulation Therapy in College Students. EHE Graduate Research Forum.
2. **Emaly Vatne**, Catherine Saenz, Justin J. Merrigan, Josh A. Hagen (2023) Cardiac-autonomic markers of recovery improve immediately following a flotation-restricted environmental stimulation therapy session in NCAA athletes *Journal of Strength and Conditioning Research*.
3. Justin J. Merrigan, **Emaly Vatne**, William J. Kraemer, Josh A. Hagen (2023) identifying force plate metrics associated with injury risk in NCAA Division-I female team-sports *Journal of Strength and Conditioning Research*.
4. Edwards, N., **Vatne, E.**, Beach, T., Caccese, J., Merrigan, J., Hagen, J., Stone, J., Onate, J. (2022) Special Weapons and Tactical Officers Have Equal Loaded and Unloaded Countermovement Jump Performances. *MSSE*.

HONORS, ACTIVITIES, AND LEADERSHIP

Robert N. and Sharon S. Gandee Endowed Scholarship Fund, \$1,407.	2023
Woody and Anne Hayes Award Recipient, \$3,000.	2023
Big Ten Conference Outstanding Sportsmanship Honoree	2023
All-Big Ten Sportsmanship Team	2022
All-District Academic Honoree	2022
Big Ten Distinguished Scholar	2021
Academic All-Big Ten Honoree	2019, 2020, 2021, 2022
Ohio State Athletics Scholar Athlete	2019, 2020, 2021, 2022
All-Big Ten Freshman Team Honoree	2018
Big Ten Freshman of the Week	2018
U.S. Under-18 Youth National Team Member	2017 – 2018

Professional Trainings and Certifications

Microsoft Certified: Azure Data Fundamentals	2023
NSCA Certified Strength and Conditioning Specialist	2021 – Present
ACSM Certified Exercise Physiologist	2021 – Present
U.S. Soccer Federation “D” Coaching License	2023 – Present
American Red Cross Adult CPR and First Aid	2018 – Present
Data Science: Foundations using R, John Hopkins University, Coursera	2023
CITI Biomedical Research Investigators	2022 – Present
CITI Biomedical Responsible Conduct of Research	2022 – Present

Activities and Leadership

The Ohio State University Varsity Women’s Soccer	2018 – 2022
Team Captain	2021 – 2022
Spent 20+ hours per week training with and leading a diverse group of women to compete at the highest level nationally while maintaining a rigorous academic course load	

Ohio Premier Soccer Club and Upper Arlington High School	
Ohio Premier Youth Academy Staff Coach	2019 – 2022
Ohio Premier Under-15 and Under-16 girls’ teams Head Coach	2023 – Present
Upper Arlington Junior Varsity girls’ soccer team Head Coach	2023 – Present

President, ACSM Exercise is Medicine Club at The Ohio State University	2021 – 2022
Invited Member, Lead Like a Buckeye at The Ohio State University	2021 – 2022

Professional Affiliations

National Strength and Conditioning Association (NSCA)	2020 – Present
American College of Sports Medicine (ACSM)	2020 – Present