

# JONATHAN WILDER

MS

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BIOMECHANICS

## EDUCATION

	MARQUETTE UNIVERSITY/ MEDICAL COLLEGE OF WISCONSIN	
MS	Biomedical Engineering Concentration in Biomechanics	2024
	MARQUETTE UNIVERSITY	
BS	Biomedical Engineering	2021

## AFFILIATIONS

Sigma Phi Delta Engineering Fraternity

## PROFESSIONAL PROFILE

*Mr. Jonathan Wilder* received his BS in Biomedical Engineering from Marquette University, where he took a keen interest in biomechanics during his undergraduate studies. For his senior capstone project, Mr. Wilder and his group designed and developed an olfactometer (smell-test) device from concept to prototype. This device will be utilized to assess the level of smell loss in COVID-19 patients, providing an opportunity to investigate the long-term effects of COVID-19 on olfactory functions.

*Mr. Wilder* further his education by completing an MS in Biomedical Engineering from Marquette University. During his graduate research, he contributed to the development of a wearable ear-based head impact sensor, performing head impact experiments and biomechanical analyses. His research focused on evaluating the accuracy of head acceleration measurements for different head sizes and validating the sensor’s performance in the laboratory.

*Mr. Wilder* is beginning his post-grad career as a Scientist in Explico’s Tampa office, where he performs biomechanical analyses for real-world accidents. He conducts vehicle inspections using state-of-the-art technologies to gather data and evidence. He performs detailed review and synthesis of case related material. He performs biomechanical calculations and simulations, as well as advanced biomechanical testing and experimentation. Mr. Wilder also uses communication and presentation skills to communicate the results of his analysis.



## AREAS OF EXPERTISE

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SOLIDWORKS

MATLAB

AutoCAD

DataPRO

Motion Studio

## EXPERIENCE

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### Explico

2026 - Present

*Scientist*

2024 - 2025

*Associate Scientist*

### Marquette University / Medical College of Wisconsin

2022 - 2024

*Research Assistantship*

### Pentair

2021

*Manufacturing Engineering Intern*

### Andis Company

2020

*Product Engineering Co-op*

## ENGINEERING PROJECTS

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Master's Thesis Project, *Analysis of Head Resultant Linear Acceleration Transformation to Head Center of Gravity for Ear-Based Sensor Application*, 2022-2024

Senior Design Project, *Precise Testing of Smell Loss in COVID-19 Patients*, 2020-2021

## PRESENTATIONS

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Wilder, J.W., Shah, A.S., Seifert, J., Wells-Rutherford, S., Dietz, A., Stemper, B.D. Feasibility of in-ear accelerometers used to monitor blast-induced head kinematics, 59th International Biomedical Sciences Instrumentation Symposium & 59th Rocky Mountain Bioengineering Symposium, April 8th-9th, 2022.

Wilder, J.W., Shah, A.S., Seifert, J., Wells-Rutherford, S., Dietz, A., Stemper, B.D. Determination of Head Acceleration Measurement Error Associated with Subject Anthropometry for In-Ear Head Impact and Blast Sensors, Military Health System Research Symposium 2023, August 14th-17th, 2023.