Benjamin Rush

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EDUCATION

Ph.D.	Nutritional Sciences	2022
	University of Wisconsin- Madison	
M.P.H	Epidemiology	2015
	Indiana University- Bloomington	
B.S., B.S.	Biology, Neuroscience	2013
	Indiana University- Bloomington	

APPOINTMENTS

Informatics Data Scientist, Lab of John Garrett & Department of Radiology University of Wisconsin-Madison	2024-Present
Postdoctoral Research Associate, Labs of Claudia Solis-Lemus & John Garrett University of Wisconsin-Madison	2023- 2024
Scientist, Lab of Adam Kuchnia University of Wisconsin-Madison	2022- 2022
Statistical Consulting, Lab of Alfonso Morales University of Wisconsin- Madison	2019-2021
Graduate Research Assistant, Lab of Adam Kuchnia University of Wisconsin- Madison	2019-2022
Personal Chef, Chefs for Seniors Madison, Wisconsin	2017-2018
Health and Wellness Coordinator, Boys and Girls Club Oshkosh, Wisconsin	2016-2017
Farm to School AmeriCorps Member, AmeriCorps & Winnebago County Health Dept. Oshkosh, Wisconsin	2016-2017
Alternative Classroom Experience Counselor, AmeriCorps & Pfeifer Kiwanis Camp Little Rock, Arkansas	2015-2016
Statistical Consulting, Lab of Lucia Guerra-Reyes Indiana University-Bloomington	2015
Research, Education, and Policy Intern, Department of Epidemiology and Biostatistics Indiana University-Bloomington	2015
Graduate Research Assistant, Lab of M. Aaron Sayegh Indiana University-Bloomington	2014-2015

MENTORSHIP

Graduate Students Mentored

Lauren Clark Current Nutritional Sciences Doctoral Student, University of Wisconsin-Madison	2021- 2023
Israel Rodriguez Current Healthcare Data Analyst at IEHP	2014-2015
Emily Abruzzi Current Senior Research and Evaluation Associate at Ripple Effect	2014-2015

Undergraduate Students Mentored

Alexandria Wong Current Data Science Major, University of Wisconsin-Madison	2024-Present
Yunju Ha Current post-bachelor researcher at National Institutes of Health, Graduate of University of Wisconsin-Madison 2025	2023-2025
Lakes Tang Current Computer Sciences Major, University of Wisconsin-Madison	2023-2024
Sujay Garlapati Current medical student at Drexel, Graduate of University of Wisconsin-Madison 2023	2021-2022
Arden He Graduate of University of Wisconsin-Madison 2022	2020-2021
Olivia Rossman Graduate of University of Wisconsin-Madison 2023	2020-2021
Hunter Weber Graduate of University of Wisconsin-Madison 2021	2019-2020

COMMUNITY ENGAGEMENT

Machine Learning + X Leadership Committee Wisconsin Institute of Discovery, University of Wisconsin-Madison	2023-Present
Founding Member, Justice, Equity, Diversity, and Inclusion Committee	2020-2022

Department of Nutritional Sciences, University of Wisconsin- Madison

Council Member, Madison Food Policy Council   2019-2021
Madison, Wisconsin

Vice President, Rotaract of Oshkosh   2016-2017

TEACHING EXPERIENCE

Instructor, Improv for STEMM (graduate and professional level)   2023
Department of Medicine, University of Wisconsin- Madison

Co-instructor, Improv for Scientists with Amy Zelenski (graduate level)   2022
Department of Medicine, University of Wisconsin- Madison

Co-instructor, Improv for Health Professionals with Amy Zelenski (professional level) 2021
Department of Medicine, University of Wisconsin- Madison

Food Policy Instructor, Food and Culture Special Topics Course (undergraduate level)   2019
Department of Medicine, University of Wisconsin- Madison

Statistics and Coding Instructor, Lab of M. Aaron Sayegh (graduate level)   2014-2015
Department of Epidemiology and Biostatistics, Indiana University- Bloomington

Teaching Assistant, Integrative Human Physiology (undergraduate level)   2012-2013
Department of Human Biology, Indiana University- Bloomington

SCIENCE COMMUNICATION & MEDIA EXPERIENCE

Creation and Facilitation of Applied Improv for Scientists Workshops   2024-present

Emcee of "Why-Sci Variety Show" by the Wisconsin Science Festival   2025

Emcee, produce, and performer for Sci-prov: science and improve combined   2024- present

Founder of Amalgam Improv (link)   2024- present

Emcee of "Big Ideas for Busy People" by the Wisconsin Science Festival   2024

Science and Art AI Morphs Exhibit   2024

Emcee of Wisconsin Institute of Discovery Annual Symposium   2023

Founder and CEO of Deeper Than Data Media   2020-Present

Host and Producer, Deeper Than Data Podcast (link)	2020-2023
Host and Producer, Badger Talks Podcast (link)	2021-2023
President, Neuroscience Club at Indiana University-Bloomington	2011-2013

HONORS AND AWARDS

"Geospatial Linking & Mapping of CT-derived Biomarkers, Socioeconomic Status, and Healthcare Access" Internal Research & Development Pilot Grant. Department of Radiology, University of Wisconsin-Madison	2025-2026
NIH Clinical Research Loan Repayment Program Award Selectee	2025-present
Open Science Grid selected scholar, Open Science Grid User School Madison, Wisconsin	2023
Honorary associate in the Department of Surgery School of Medicine and Public Health, University of Wisconsin- Madison	2021-2024
Graduate Engaged Scholar Nomination by Graduate Program Coordinator Department of Nutritional Sciences, University of Wisconsin- Madison	2021
Undergraduate Mentorship Award Nomination by Prof. Adam Kuchnia Department of Nutritional Sciences, University of Wisconsin- Madison	2020
Hattie B. Goessling Nutritional Science Scholarship Department of Nutritional Sciences, University of Wisconsin- Madison	2020
Hattie B. Goessling Nutritional Science Scholarship Department of Nutritional Sciences, University of Wisconsin- Madison	2019
Ruth and Carl Miller Academic Merit Award Department of Nutritional Sciences, University of Wisconsin- Madison	2019

PROFESSIONAL SOCIETIES

Society of Imaging Informatics in Medicine

American Society for Bone and Mineral Research

American Association for the Advancement of Science

PUBLICATIONS

Krueger, D, Borchardt, G… **Rush, B. E.,** et al. Novel DXA body composition approaches: comparison with traditional total body scans. *Journal of Clinical Densitometry*, 2026.

Rush, B.E., Moeller, A, Lee, M.H., Pooler, B.D., Summers, R. M., Pickhardt,P.J., Garrett, J.W. A Novel Deep Learning-Based Automated Adipose Tissue Segmentation Model for Value-Added Screening at Abdominal CT. *Abdominal Radiology*, in review.

Pooler, B.D., Garrett, J.W., Lee, M.H., **Rush, B.E.**, Summers, R.M., Pickhardt, P.J. CT-Based Body Composition Measures and Systemic Disease: A Population-Level Analysis Using Artificial Intelligence Tools in Over 100,000 Patients. *American Journal of Roentgenology*, published online.

Rush, B.E., Garlapati, S., Lortie, J., Osterbauer, K., Colgan, T. J., Tamada, D., Campbell, T. C., Traynor, A., Leal, T., Lee, K., Reeder, S. B., & Kuchnia, A. J. Uncorrected and subcutaneous fat-corrected echo intensities are similarly associated with magnetic resonance imaging per cent fat. *JCSM Communications*, 2024.

Lortie, J., **Rush, B.E.**, Gage, Gr., Dhingra, R., Hetzel, S., Pickhardt, P., Szczykutowicz, T., Kuchnia, A. Correcting Posterior Paraspinal Muscle Computed Tomography Density for Intravenous Contrast Material Independent of Sex and Vascular Phase, *Journal of Thoracic Imaging*, 2023.

Lortie, J., Gage, G., **Rush, B.E.**, Heymsfield, S., Szczykutowicz, T., and Kuchnia, A. The effect of computed tomography parameters on sarcopenia and myosteatosis assessment: a scoping review. *Journal of Cachexia, Sarcopenia and Muscle*, 2022.

Lortie, J.*, **Rush, B.E.***, Osterbauer, K., et al. Myosteatosis as a Shared Biomarker for Sarcopenia and Cachexia Using MRI and Ultrasound. *Frontiers in Rehabilitation Sciences*, 2022.
* Co-first authorship

Rush, B.E., Binkley, N., Kruger, D., et al. Combination of DXA and BIS predicts jump power better than traditional measures of sarcopenia. *Journal of Bone Mineral Research Plus,* 2021.

Guerra-Reyes, L., **Rush, B.E.**, Herbenick, D. et al. Sexual Health and Language Dominance Among Hispanic/Latino Women and Men: Analysis of a Nationally Representative Sample. *Journal of Immigrant Minority Health*, 2016.

PEER REVIEW

NPJ Oncology
International Society for Computational Biology
Osteoporosis International
Journal of Food Science
Gerontology

PRESENTATIONS

Invited Presentations

"Better Data Science Communication through Improv" 2026
Data Science Research Bazaar, University of Wisconsin-Madison

"Skills Building Seminar: AI as a Productivity Assistant" 2026
Research Summit, Department of Surgery, University of Wisconsin-Madison

"The Effects of Prompt Engineering and Consensus on Identification of Incidental 2025
Breast Findings by Large Language Models from Radiology Reports"
Society for Imaging Informatics in Medicine Annual Meeting, Portland, Oregon

"Mission Genesis: Generative AI, creativity, and science communication" 2025
Research Bazaar Symposium, University of Wisconsin-Madison

"Team Science Workshop" 2025
University of Colorado-Boulder, Interdisciplinary Quantitative Biology

"The Effect of Prompt Elements on Labelling Incidental Breast Findings by 2024
Llama3-8B in Radiology Reports"
Society of Imaging Informatics in Medicine, Conference on Machine Intelligence in
Medical Imaging

"Evaluating prompts and LLMs to identify incidental findings in radiology reports" 2024
Systems | Information | Learning | Optimization, University of Wisconsin, Madison

"An introduction to strategic science communication" 2024
Computational & Mathematical Biology Program, University of Wisconsin, Madison

"Exploring AI in Teaching: Use Cases for Your Course" 2024
Center for Teaching, Learning, & Mentoring, University of Wisconsin, Madison

"Statistical and Epidemiological Concepts for Screening Radiology" 2024
Screening Radiology Elective, University of Wisconsin, Madison

"AI for Scientists" Workshop 2024
Departments of Radiology and Medical Physics, University of Wisconsin, Madison

"Tech in Writing" invited speaker 2024
Institute for Clinical and Translational Research, University of Wisconsin, Madison

"Empathetic Science Communication for KL2 Scholars" 2024
Institute for Clinical and Translational Research, University of Wisconsin, Madison

"Something's funny: humor for better communication and teamwork in science" 2024

Plant Pathology JEDI seminar, University of Wisconsin, Madison

Moderator for closing panel Research Bazaar, University of Wisconsin, Madison	2024
"AI for Scientists" Workshop Research Bazaar, University of Wisconsin, Madison	2024
"The SciComm Generator" from Deeper Than Data Media 1 Million Cups invited presenter, Starting Block, Madison	2024
"Science communication + GPT: Strategies for open and empathetic science communication" Machine Leaning + X Forum, University of Wisconsin- Madison	2023
"An introduction to strategic science communication" Illinois Institute of Technology	2023
"Something's funny: humor for better communication, teamwork and ideas in science" Illinois Institute of Technology	2023
"An introduction to strategic science communication" Asa Gray Biological Society, Utica University	2023
Emcee and facilitator Wisconsin Institute of Discovery Annual Symposium	2023
"That was funny: humor for building trust, creativity, and fun" International Conference for Association for Experiential Education	2023
Mastering Science Communication: Insider Trips and Best Practices for Success Midwest Big Data Hub's Data Science Student Groups Webinar Series	2023
Humor and Science Workshop Wisconsin Institute for Discovery	2023
Exercising Interpersonal Agility to Foster Belonging and Empathy Workshop Teaching and Learning Symposium	2023
The Deeper than Data Media Story University of Wisconsin-Madison Podcasters Group	2023
"Podcasting in the classroom" Workshop American Physiological Association- Institute on Teaching and Learning	2022
"Improv for Wild-lifers"	2021

The Wildlife Society Annual Conference

"Do financial incentives increase fruit and vegetable consumption and diet quality?"   2019
Catalyst for Science Policy, University of Wisconsin-Madison

"Understanding multi-level linear modeling", Infectious Disease Epidemiology   2015
Department of Epidemiology and Biostatistics, Indiana University- Bloomington

"An introduction to meta-analyses", Integrative Human Physiology,   2014
Department of Human Biology, Indiana University- Bloomington

Peer Reviewed Conference Presentations

"Predicting muscle function from body composition using machine learning"   2024
Research Bazaar, University of Wisconsin, Madison

"Utilizing Large Volume CT Data to Uncover Trends In Radiology Resource Utilization   2024
and Survival in Socioeconomically Disadvantaged Patients"
American Roentgen Ray Society, Boston, Massachusetts

"Predicting muscle function from body composition using machine learning"   2023
Skeletal Muscle Symposium, University of Wisconsin, Madison

"Fat segmentation by deep learning-based model faster and preferred without reducing   2023
predictive capabilities"
Midwest Machine Learning Symposium, Chicago, Illinois

"Determining Biomarkers of Myosteatosis for Sarcopenia and Cachexia Using MRI and   2022
Ultrasound"
Experimental Biology Conference, Philadelphia, Pennsylvania

"Establishing imaging biomarkers of myosteatosis"   2021
Skeletal Muscle Network Symposium, University of Wisconsin-Madison

"Correcting for subcutaneous adipose tissue marginally improves the association   2021
between ultrasound echo intensity and magnetic resonance proton density fat fraction"
International Conference for Frailty and Sarcopenia Research

"The combination of DXA and BIS to predict jump power"   2020
Annual Nutritional Sciences Poster Presentation, University of Wisconsin-Madison

"Novel muscle measurement methods to improve muscle health assessment throughout   2019
the aging process"
Colloquium on Aging, University of Wisconsin-Madison

"Validating the association between the DXA and BIS combination and physical   2019
function to improve the diagnosis of sarcopenia"
Annual Nutritional Sciences Poster Presentation, University of Wisconsin-Madison

"Orgasm as a function of sexual repertoire complexity and consistency"   2014
Society for the Scientific Study of Sex Annual Conference, Omaha, Nebraska

PRESS AND MEDIA FEATURES

"Improv, AI and the mind of UW employee, comedian Ben Rush." The Daily Cardinal,   2025
student newspaper at University of Wisconsin–Madison

"Wisconsin Science Festival: Coming to backyards, living rooms and sites statewide Oct   2021
21-24". Madison365

"The Podcasters of CALS". GROW Magazine, College of Agricultural & Life Sciences   2021