

Malcolm Udeozor

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EDUCATION

University of Cincinnati College of Medicine (UCCOM), Cincinnati, OH June 2023—
Doctor of Medicine/MSTP Program MD/Ph.D.

Carnegie Mellon University, Pittsburgh, PA September 2015—May 2019
Bachelor of Science in Cognitive Neuroscience

HONORS & AWARDS

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| NIH Intramural Research Training Award | June 2020—2023 |
| NIMH Annual Julius Axelrod Symposium, Nominated presentation | April 2022 |
| NIMH Annual Three Minute Talk Competition (TMT), Winner | September 2021 |
| NIH Postbac Poster Day, Outstanding Poster Award | April 2021 |
| Mellon College of Science Dean's List | 2016–17, 2018–19 |

GRANTS AND FELLOWSHIPS

University of Cincinnati Albert C. Yates Fellowship Program (\$25,000 award) June 2025

RESEARCH EXPERIENCE

Ph.D. Student May 2025—

University of Cincinnati College of Medicine, Cincinnati OH

PI (Primary): Dr. Ishita Basu, PhD, Department of Neurosurgery

- **Computational Neuromodulation Lab** – employ signal processing and biophysical modeling to study brain activity and develop neuromodulation strategies aimed at improving cognitive function in individuals with neural pathologies

PI (Secondary): Dr. Laura Ngwenya, MD/Ph.D., Department of Neurosurgery

- **Translational NeuroTrauma Lab** – investigate mechanisms of poor recovery after traumatic brain injury using clinical research, bioinformatics, and experimental models to identify potential treatments

Summer Research Fellow, Computational Neuromodulation Lab June 2023—July 2023

University of Cincinnati College of Medicine, Cincinnati, OH

PI: Dr. Ishita Basu, PhD, Department of Neurosurgery

- **Cognitive Impairment from Post-Stroke Depression** – examined differences in event related electroencephalography (EEG) signal characteristics between individuals with post-stroke depression and healthy controls on the multi-source interference task (MSIT)

Post-Baccalaureate Research Fellow, Laboratory of Brain and Cognition June 2020—2023

National Institute of Mental Health, Bethesda, MD

PI: Dr. Christopher Baker, PhD, National Institute of Mental Health

- **Tactile Reinstatement Study** – explored tactile motor behaviors associated with memory recall using cognitive, psychophysical, and electromyography (EMG) measurements, computational modeling (ML Decoding, RSA, and Deep learning)

- **ProControl Robotic Prosthesis Study** – examined the efficacy of different control mechanisms for modern prosthetic devices to optimize the learning process for amputees and congenitally limbless individuals.
- **Amy (amygdala) Faces and Emotions** – compared the BOLD response in the amygdala between emotional human and pareidolia faces, hoping to elucidate the neural underpinnings of face processing

Student Researcher, Neuromatch Academy
Virtual

August 2021

Supervisor: Dr. Christopher Baker, PhD

- **Deepsynch Group Project** – adapted Google’s Inception ResNet V2 convolutional neural network to distinguish between pre-ictal and normal spectrograms from intracranial EEG recordings with ~70% accuracy

Research Assistant, Health and Human Performance Laboratory
Carnegie Mellon University, Pittsburgh, PA

September 2017—May 2019

Supervisor: Dr. David Creswell, PhD, Department of Psychology

- **Healthy Aging Study** – contrasted the effect of mindfulness based stress reduction with general healthy living on psychophysiological development and loneliness in older adults (65+).
- **Adversity Study** – devised a strategy for persistence through times of great adversity by compiling a profile of coping mechanisms from individuals with relevant experiences.
- **CMU Headspace Study** – leveraged Diffusion Tensor Imaging and fMRI to examine structural and functional neural adaptations after acute mindfulness intervention

RESEARCH PRODUCTS

Manuscripts

Schone, H.R., **Udeozor, M.**, Moningerhoff, M. *et al.* Biomimetic versus arbitrary motor control strategies for bionic hand skill learning. *Nat Hum Behav* **8**, 1108–1123 (2024). <https://doi.org/10.1038/s41562-023-01811-6>

Posters

Wardle, S., Taubert, J., **Udeozor, M.**, & Baker, C. Cortical and subcortical correlates of emotional expression in face pareidolia. *Society for Neuroscience*, 2025 May 16. St. Pete Beach, Florida

Udeozor, M., Copes-Fink, D., Harrington, C., Hattemer, R., Kesaraju, S., Lee, D., McFadden, E., Mojica, I., Naqvi, M., Reddy, S., Robinson, B., & Tarcha, L. Implementing a colorectal cancer screening tool for the Crossroad Community. *Service Learning Symposium*, April 2024. Cincinnati, OH

Udeozor M, Schone H, Baker C, Is the human body the best model for controlling artificial limbs? Comparing biomimetic vs arbitrary motor control strategies. *Society for Neuroscience*, 2022 November 16. San Diego, California

Udeozor M, Schone H, Rispoli B, Baker C, Becoming a Skywalker: Learning to control a new (artificial) body-part. *NIH Annual Postbac Poster Day*, National Institutes of Health. 2021 April 28. Bethesda, Maryland. <https://irp.nih.gov/blog/post/2021/05/postbac-poster-day-showcases-young-scientific-talent>

Nominated presentations

Udeozor M, Nau M, Baker C, Decoding Objects via Motor Replay. *Julius Axelrod Symposium*, National Institute of Mental Health. 2022 April 20. Bethesda, Maryland

Udeozor M, Decoding Objects via Motor Replay. *Three Minute Talk Competition*, National Institute of Mental Health. 2021 September 24. Bethesda, Maryland. <https://youtu.be/Kqbg0zZsmo4>

VOLUNTEERING & COMMUNITY SERVICE

Health Screening Volunteer, Student Run Free Clinic January 2024—

University of Cincinnati College of Medicine, Cincinnati, OH

- Provide basic health screenings and front desk support at the Healing Center, including blood glucose and blood pressure checks, community outreach, and promotion of free medical services and clinic visits.

Flying Pig Marathon Medical Volunteer May 2025
Cincinnati, OH

- Provided first aid and medical support to runners during a marathon, monitoring for signs of distress and assisting with on-site care.

Community Service Learning Project April 2024
Crossroad Health Center, Cincinnati, OH

- Designed a shared decision making tool to boost colorectal cancer screenings in high risk patients

Clinical Volunteer January 2021—February 2021
Advanced Videoscopic and Laparoscopic Surgery Center, Lagos, Nigeria

- Assisted nurses by performing tasks such as fixing lamps, handling surgical waste, and engaging patients in conversation pre and post procedure

Clinical Shadow June 2018—August 2018
Stepping Stones Program, Rockville, MD

- Acquired essential shadowing experience with Adventist Healthcare physicians in Washington D.C and Shady Grove, Maryland

Clinical Shadowing Fellow December 2017—January 2018
Atlantis Innovating Healthcare Education, Huesca, Spain

- Gained significant experience with medical Spanish to develop communication skills with future patients of Hispanic backgrounds

LEADERSHIP

Committee Member, Research and Industry Relations Committee June 2025—
University of Cincinnati College of Medicine, Cincinnati, OH

- Facilitate medical student engagement in research initiatives like Summer Opportunities Week, Medical Student Grand Rounds, and the MedCat Orientation Fair.

MAPS Liaison, Student National Medical Association (Region V) April 2024—April 2025
University of Cincinnati College of Medicine, Cincinnati, OH

- Encouraged minority pre-health students to pursue their aspirations in medicine through workshops, team bonding events, and mentorships with current UC med students

Vice President, Young African Leaders Association, August 2017—May 2019
Carnegie Mellon University, Pittsburgh, PA

- Execute events that provide a foundation for African students to excel in CMU's rigorous environment
- Raised over 4000 dollars to fund 10 members' trips to the Harvard African Business Conference where they attended workshops and venture competitions to develop their entrepreneurial and networking skills

Programs Chair, Minority Association for Pre-Health Students
Carnegie Mellon University, Pittsburgh, PA

August 2017—May 2018

- Administrated the Big Doc/Little Doc program that connects pre-health students at Carnegie Mellon with medical students at the University of Pittsburgh so that aspiring health professionals can receive proper guidance to reach their goals

TEACHING & MENTORSHIP

MSTP Mentoring Officer

June 2024—

University of Cincinnati College of Medicine, Cincinnati, OH

- Pair incoming MSTP students with upperclassmen and organize bonding events to cultivate a supportive and enriching environment for new students

Teaching in Medicine Elective (TiME)

September 2024—

University of Cincinnati College of Medicine, Cincinnati, OH

- Compose tutoring PowerPoints and hold tutoring sessions for preclinical medical students in anatomy, musculoskeletal and dermatology, and nervous systems and psychiatry courses

Bearcat Mentor

September 2023—

University of Cincinnati College of Medicine, Cincinnati, OH

- Support pre-med undergraduates by sharing my experiences and offering guidance to help them achieve their goals of gaining admission to medical school and excelling in their future careers

Python Teaching Assistant

May 2021—July 2021

National Institutes of Health, Bethesda, MD

- Graded assignments and held office hours for interns and postbacs learning Python coding language through the Office of Intramural Training and Education at the NIH

Mentor/Volunteer, National Association for Black Engineers

August 2016—May 2019

Carnegie Mellon University, Pittsburgh, PA

- Promote academic skills and habits for inner-city middle schoolers by providing stimulating and challenging STEM projects

EMPLOYMENT

Barista

March 2020—November 2020

Starbucks, Potomac, MD

- Aided daily store operations by preparing drinks, taking orders, and helping maintain a smooth and welcoming customer experience in a fast-paced environment

Office Administrator

May 2017—August 2017

Digestive Disease Clinic, Rockville, MD

- Managed high-volume customer service by scheduling patients and coordinating physicians with insurance companies

LANGUAGES

- Fluent in English
- Advanced in Spanish
- Beginner in Igbo

HOBBIES & INTERESTS

- Music creation, recreational sports (football, basketball, soccer), web/app development, creating social media content, cooking/baking