

Basheer Qolomany, Ph.D., is an assistant professor of artificial intelligence and computational medicine in the Department of Medicine at Howard University College of Medicine, where he serves as director of the [AI-Driven Computational Medicine and Smart Health \(AICMSH\) Laboratory](#). He is also affiliated with Howard University's Center for Applied Data Science and Analytics and Center for Sickle Cell Disease. His research lies at the intersection of artificial intelligence, computational medicine, population health, and biomedical data science, with a focus on developing innovative computational approaches that improve disease prediction, clinical decision-making, and health outcomes.

As an interdisciplinary scientist, Qolomany integrates advanced artificial intelligence methodologies including machine learning, deep learning, natural language processing, graph representation learning, explainable AI, and large language models, with multimodal biomedical data sources such as electronic health records, medical imaging, genomic data, physiological signals, wearable technologies, and longitudinal cohort studies. His work seeks to transform complex and heterogeneous health data into clinically actionable knowledge that supports precision medicine, early disease detection, personalized interventions, and equitable healthcare delivery.

Through the AICMSH Laboratory, Qolomany leads collaborative research initiatives spanning Alzheimer's disease progression modeling, sleep medicine, HIV outcomes research, blood transfusion decision support, colorectal cancer risk stratification, dermatologic image analysis, and aging-related mobility decline. Working closely with clinicians, biomedical researchers, and public health scientists, he develops interpretable and clinically relevant AI systems designed for real-world healthcare applications.

Qolomany's long-term vision is to establish next-generation computational frameworks that bridge artificial intelligence, clinical medicine, and population health to address some of the most pressing healthcare challenges facing diverse and historically underserved communities. His research emphasizes methodological rigor, reproducibility, transparency, and health equity, ensuring that emerging AI technologies translate into meaningful improvements in patient care and public health.

Prior to joining Howard University, Qolomany held faculty and research appointments at the University of Cincinnati, the University of Nebraska, Kennesaw State University, Western Michigan University, and the U.S. Department of Veterans Affairs. He has authored numerous peer-reviewed publications in leading scientific journals and conferences and actively collaborates with researchers across medicine, public health, artificial intelligence, and biomedical informatics.