HYUNJUNG GLORIA KWAK, PhD
Assistant Professor
Nell Hodgson Woodruff School of Nursing
Emory University
Hyunjung.kwak@emory.edu

EDUCATION

2021	The Hong Kong University of Science and Technology, Hong Kong, HKG	Doctor of Philosophy, Computer Science and Technology
2014	University College London, London, GBR	MS, Machine Learning
2013	Korea University, Seoul, KOR	BS, Computer and Communication Engineering
2012	University of Nottingham, Nottingham, GBR	Erasmus

PROFESSIONAL POSITIONS

August 2024- Present	Assistant Professor, Emory University School of Nursing
January 2024- Present	Section Editor, Algorithm Bias and Digital Health Equity, PLOS Digital Health
2021-2024	Research Fellow, Department of Neurology, Harvard Medical School
2021-2024	Research Fellow, Department of Neurology, Massachusetts General Hospital
2022	Course Faculty, Massachusetts Institute of Technology
2022	External Committee Member, Harvard T.H. Chan School of Public Health
2018-2020	Teaching Assistant, The Hong Kong University of Science and Technology, Hong Kong, HKG
2015-2017	Data Scientist, Artificial Intelligence Center, LG (CNS), Seoul, KOR
2015	Data Analyst, Data Analytics & Consulting, Deloitte, Seoul, KOR
2012	Research Intern, National Forensic Service, Seoul, KOR

SCHOLARSHIP: PUBLICATIONS

Articles

Septic Shock Requiring Three Vasopressors: Patient Demographics and Outcomes
Gloria Hyunjung Kwak, RWMA Madushani, Lasith Adhikari, April Yujie Yan, Eric S. Rosenthal, Kahina Sebbane, Zahia Yanes, David Restrepo, Adrian Wong, Leo Anthony Celi, and Emmett Kistler
Critical Care Explorations, 2024

Social Determinants of Health and Limitation of Life-Sustaining Therapy in Neurocritical Care: A CHoRUS Pilot Project
Gloria Hyunjung Kwak, Hera A Kamdar, Molly J Douglas, Hui Hu, Sophie E Ack, India A Lissak, Andrew E Williams, Nirupama Yechoor, and Eric S Rosenthal
Neurocritical Care, 2024

EchoNotes Structured Database derived from MIMIC-III (ECHO-NOTE2NUM)
Gloria Hyunjung Kwak, Dana Moukheiber, Mira Moukheiber, Lama Moukheiber, Sulaiman Moukheiber, Neel Butala, and Leo Anthony Celi
PhysioNet, 2024

Effects of the COVID-19 pandemic on senior dental students in Korea: Examining stress, burnout, and depression
Gloria Hyunjung Kwak, Seung-Ho Baek, and Eun-Jung Kwak

Journal of Dental Sciences, 2023

Incidence and risk of mortality in patients on three vasopressors for management of septic shock
Gloria Hyunjung Kwak, RWMA Madushani, Lasith Adhikari, April Yujie Yan, Leo Anthony Celi, Adrian Wong, and Emmett Kistler
Critical Care Medicine, 2023

Health Beyond Clinical Data:How Social Determinants of Health Impact Health Predictions
Ming Yang, Gloria Hyunjung Kwak, Tom Pollard, Leo Anthony Celi, and Marzyeh Ghassemi
AAAI/ACM Conference on AI, Ethics, and Society, 2023

Neuroscience intensive care mortality, limitation of life-sustaining therapy, and detection of neurologic deterioration are associated with social determinants of health
Gloria Hyunjung Kwak, Sophie Ack, Hera Kamdar, Christopher Reeves, Nirupama Yechoor, Theresa Williamson, and Eric S Rosenthal
Neurocritical Care Society, 2022

Resting State Electroencephalography for Continuous, Passive Prediction of Coma Recovery After Acute Brain Injury
Morteza Zabihi, Daniel Rubin, Sophie E Ack, Katarina Ho, Gloria Hyunjung Kwak, Valdery Moura Junior, Sahar Zafar, Yelena Bodien, and Eric S Rosenthal
Neurocritical Care Society, 2022

Predicting Hyperkalemia in the ICU and Evaluation of Generalizability and Interpretability
Gloria Hyunjung Kwak, Christina Chen, Lowell Ling, Erina Ghosh, Leo Anthony Celi, and Pan Hui
AAAI Trustworthy Workshop, 2021

Deep reinforcement learning approaches for global public health strategies for COVID-19 pandemic
Gloria Hyunjung Kwak, Lowell Ling, and Pan Hui
Plos one 16.5 (2021) e0251550. 2021

Predicting the need for vasopressors in the intensive care unit using an attention based deep learning model
Gloria Hyunjung Kwak, Lowell Ling, and Pan Hui
Shock, 2021

Automatic mandibular canal detection using a deep convolutional neural network
Gloria Hyunjung Kwak, Eun-Jung Kwak, Jae Min Song, Hae Ryoun Park, Yun-Hoa Jung, Bong-Hae Cho, Pan Hui, and Jae Joon Hwang
Scientific Reports, 2020

Predicting the need for intubation in the first 24 h after critical care admission using machine learning approaches
Benjamin Ming Kit Siu, Gloria Hyunjung Kwak, Lowell Ling, and Pan Hui
Scientific reports, 2020

DeepHealth: Review and challenges of artificial intelligence in health informatics
Gloria Hyunjung Kwak and Pan Hui
arXiv, 2019

TEACHING ACTIVITIES

Courses Taught
2022 HST 936 Health Disparities Research and Data Science for Disaster Resilience, Faculty
2022 BST 209 Collaborative Data Science in Healthcare
2020 COMP 4611 Computer Architecture
2020 COMP 1001 Exploring Multimedia & Internet Computing
2019 COMP 1001 Exploring Multimedia & Internet Computing
2018 COMP 1001 Exploring Multimedia & Internet Computing

PROFESSIONAL AND UNIVERSITY SERVICE ACTIVITIES
Member in Professional Organizations

American College of Surgeons Quality and Safety Conference	Speaker
Yonsei University College of Medicine Clinical Seminar	Speaker
KAIST Clinical Seminar	Speaker
Neurocritical Care Society	Presenter
Critical Care Congress	Presenter
Duke Datathon	Committee
Emory Health AI Bias Datathon	Committee
MIT Critical Datathon	Committee
Women in Data Science	Committee
Singapore Clinical Datathon	Committee
Chinese PLA General Hospital-MIT Health Data Conference	Committee
Korea Clinical Datathon	Committee
Japan Big Data Machine Learning in Healthcare	Committee
Journal of Clinical and Translational Science	Reviewer
Journal of Clinical Monitoring and Computing	Reviewer
PLOS Digital Health	Reviewer
Nature Scientific Reports	Reviewer
Nature Scientific Data	Reviewer
IEEE Access	Reviewer
IEEE Journal of Biomedical and Health Informatics	Reviewer
Neurocritical Care Society	Member
Critical Care Congress	Member