

HYUNJUNG GLORIA KWAK, PhD  
Assistant Professor  
Nell Hodgson Woodruff School of Nursing  
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## 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

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## 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, 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

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## SCHOLARSHIP: PUBLICATIONS

### Articles

Septic Shock Requiring Three Vasopressors: Patient Demographics and Outcomes

Gloria Hyunjung Kwak, RWMA Madushani, Lasith Adhikari, April Yujie Yan, Adrian Wong, Leo Anthony Celi, 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, Eric S Rosenthal

Neurocritical Care (2024) pp. 1–14. 2024

EchoNotes Structured Database derived from MIMIC-III (ECHO-NOTE2NUM)

Gloria Hyunjung Kwak, Dana Moukheiber, Mira Moukheiber, Lama Moukheiber, Sulaiman Moukheiber, Neel Butala, 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, Eun-Jung Kwak

Journal of Dental Sciences (2023). Elsevier, 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, Emmett Kistler  
Critical Care Medicine 51.1 (2023) p. 587. 2023

Health Beyond Clinical Data: How Social Determinants of Health Impact Health Predictions  
Ming Yang, Gloria Hyunjung Kwak, Tom Pollard, Leo Anthony Celi, 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, 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, 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, Pan Hui  
AAAI Trustworthy Workshop, 2021

Deep reinforcement learning approaches for global public health strategies for COVID-19 pandemic  
Gloria Hyunjung Kwak, Lowell Ling, 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, Pan Hui  
Shock 56.1 (2021) pp. 73–79. 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, Jae Joon Hwang  
Scientific Reports 10.1 (2020) p. 5711. 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, Pan Hui  
Scientific reports 10.1 (2020) p. 20931. 2020

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

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## 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

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## **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