

# Junmo Kim

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## RESEARCH INTEREST

### Medical Informatics

I'm interested in leveraging electronic health records and diverse types of medical data through artificial intelligence, to prevent disease progression, alleviate medical workforce shortage, and reduce healthcare expenditures.

- Electronic Health Records Foundation Models
- Observational Medical Outcomes Partnership Common Data Model
- AI in Electrocardiogram

## EDUCATION

### Seoul National University

- Ph.D. in Interdisciplinary Program in Bioengineering Mar 2021 – Feb 2026 (expected)
  - Research Interest: Medical Informatics
  - Advisor: [Prof. Kwangsoo Kim](#), [Prof. Hyung-Jin Yoon](#)

### Korea University

- B.S. in Industrial Management Engineering, Mathematics Mar 2015 – Feb 2021

## POSITIONS

### Seoul National University Hospital, Seoul, Republic of Korea

Jul 2020 – Present

- Research Assistant in Biomedical Research Institute
  - Advisor: [Prof. Kwangsoo Kim](#)
  - Project: Development of artificial intelligence-based pharmacovigilance prediction model
  - Project: Research on support systems for the healthcare social safety net using national claim data
  - Project: AI-based cardiovascular disease risk assessment
  - Project: Continual learning framework for multicenter study using electrocardiogram

### Korea University, Seoul, Republic of Korea

Jun 2018 – Apr 2020

- Intern Researcher in Mathematical Optimization and Operation Research Lab
  - Host: [Prof. Hong Seo Ryoo](#)
  - Project: Optimization of semiconductor automatic logistic system
  - Project: Logical analysis of economic factors for short-term forecasting of airline demand

## PUBLICATIONS

C: Conference; J: Journal  
(\*: Equal contribution)

### IN PREPARATION

- [J10] Prediction of Antibiotic-Induced Cutaneous Adverse Drug Reactions Using Electronic Health Record Foundation Models  
**Junmo Kim\***, Kyunghoon Kim\*, Jeong-Eun Yun, Yu-Kyoung Hwang, Min-Gyu Kang, Seok Kim, Sooyoung Yoo, Chaiho Shin, Suhyun Kim, Kwangsoo Kim, Sae-Hoon Kim  
**npj Digital Medicine (Under Review)** (2025)
- [J9] Deep Learning-based Prediction of Peptic Ulcer Diseases Caused by Nonsteroidal Anti-inflammatory Drugs Using Longitudinal Electronic Health Records  
Joo Seong Kim\*, **Junmo Kim\***, Hyunsoo Chung\*, Chaiho Shin, Sae-Hoon Kim, Sooyoung Yoo, Sang Hyub Lee, Kwangsoo Kim  
**Scientific Reports (Under Review)** (2025)
- [C1] MedRep: Medical Concept Representation for General Electronic Health Record Foundation Models ([Link](#))  
**Junmo Kim**, Namkyeong Lee, Jiwon Kim, Kwangsoo Kim  
**arXiv** (2025)

### PUBLISHED

- [J8] Pretrained Patient Trajectories for Adverse Drug Event Prediction Using Common Data Model-based Electronic Health Records ([Link](#))  
**Junmo Kim**, Joo Seong Kim, Ji-Hyang Lee, Min-Gyu Kim, Taehyun Kim, Chaeeun Cho, Rae Woong Park, and Kwangsoo Kim  
**Communications Medicine** (2025)

- [J7] Prediction of reduced left ventricular ejection fraction using atrial fibrillation or flutter electrocardiograms: A machine-learning study ([Link](#))  
Soonil Kwon, SooMin Chung, So-Ryoung Lee, Kwangsoo Kim, **Junmo Kim**, Dahyeon Baek, Hyun-Lim Yang, Eue-Keun Choi, and Seil Oh  
**Digital Health** (2025)

[J6] Identifying potential medical aid beneficiaries using machine learning: A Korean Nationwide cohort study ([Link](#))  
**Junmo Kim**, Su Hyun Park, Hyesu Lee, Su Kyoung Lee, Jihye Kim, Suhyun Kim, Yong Jin Kwon, and Kwangsoo Kim  
**International Journal of Medical Informatics** (2025)

[J5] Deep learning-based prediction of Clostridioides difficile infection caused by antibiotics using longitudinal electronic health records ([Link](#))  
**Junmo Kim\***, Joo Seong Kim\*, Sae-Hoon Kim, Sooyoung Yoo, Jun Kyu Lee, and Kwangsoo Kim  
**npj Digital Medicine** (2024)

[J4] Continual learning framework for a multicenter study with an application to electrocardiogram ([Link](#))  
**Junmo Kim**, Min Hyuk Lim, Kwangsoo Kim, and Hyung-Jin Yoon  
**BMC Medical Informatics and Decision Making** (2024)

[J3] Deep learning-based long-term risk evaluation of incident type 2 diabetes using electrocardiogram in a non-diabetic population: a retrospective, multicentre study ([Link](#))  
**Junmo Kim**, Hyun-Lim Yang, Su Hwan Kim, Siun Kim, Jisoo Lee, Jiwon Ryu, Kwangsoo Kim, Zio Kim, Gun Ahn, Doyun Kwon, and Hyung-Jin Yoon  
**eClinicalMedicine** (2024)

[J2] Risks of complicated acute appendicitis in patients with psychiatric disorders ([Link](#))  
**Junmo Kim\***, Chaeyoung Yang\*, Hyung Joon Joo, Rae Woong Park, Ga Eun Kim, Daeho Kim, Joonho Choi, Jun Ho Lee, Eunkyun Kim, Seon-Cheol Park, Kwangsoo Kim, and Il Bin Kim  
**BMC Psychiatry** (2022)

[J1] Real-Time Evaluation of Cerebral Autoregulation Based on Near-Infrared Spectroscopy to Predict Clinical Outcome after Bypass Surgery in Moyamoya Disease ([Link](#))  
**Junmo Kim**, Eun-Jin Ha, Hee-Soo Kim, Eun-Young Park, Hyung-Chul Lee, Yoon-Hee Choo, Youngbo Shim, Kwangsoo Kim, Keewon Kim, and Seung-Bo Lee  
**BioMed Research International** (2022)

## **AWARDS & SCHOLARSHIPS**

- |  |                |
|--|----------------|
| <b>Youlchon Foundation AI for All Fellowship</b> , AI Institute in Seoul National University | 2021 – Present |
| <b>Veritas Scholarship</b> , Korea University  | Spring 2019    |

## REFERENCES

Prof. Kwangsoo Kim

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Adjunct Associate Professor, Department of Medicine, College of Medicine, Seoul National University  
E-mail: kwangsookim@snu.ac.kr

Prof. Hyung-Jin Yoon

Professor, Department of Human Systems Medicine, Seoul National University College of Medicine  
E-mail: hjyoon@snu.ac.kr

Prof. Rae Woong Park

Professor, Department of Biomedical Informatics, Ajou University School of Medicine  
E-mail: veritas@ajou.ac.kr

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