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# Sibeen Kim

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## RESEARCH GOAL

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My research goal is to develop medical technologies such as AI-powered prosthetic limbs. By creating revenue-generating human augmentation technologies, I aim to provide affordable solutions for individuals with disabilities. To achieve this mission, I will focus on AI applications and collaborate with interdisciplinary teams.

## EDUCATION

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**Korea Advanced Institute of Science and Technology (KAIST)** Mar 2025 - Present  
M.S./Ph.D. in Artificial Intelligence (Advisor: Jaegul Choo)

**Korea University** Mar 2018 - Feb 2025  
B.S. in Biomedical Engineering, GPA: 3.91 / 4.5  
\*Frequent leave of absence for hospitalization and surgery Jan 2018 - Oct 2021

**Gyeonggi Science High School** Mar 2015 - Feb 2018  
School for Gifted Students in Science

## JOURNAL PAPERS

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[J3] **S. Kim\***, I. Kim\*, W.T. Yuh\*, S. Han, C. Kim, Y.S. Ko, W. Cho, S.B. Park. Augmented prediction of vertebral collapse after osteoporotic vertebral compression fractures through parameter-efficient fine-tuning of biomedical foundation models. Submitted to *Scientific Reports*, 2024. (\*co-first authors)

[J2] Y.W. Park, G. Jang, **S.B. Kim**, K. Choi, K. Han, N. Shin, S.S. Ahn, J.H. Chang, S.H. Kim, S. Lee, R. Jain. Leptomeningeal metastases in isocitrate dehydrogenase-wildtype glioblastomas revisited: Comprehensive analysis of incidence, risk factors, and prognosis based on post-contrast fluid-attenuated inversion recovery. *Neuro-Oncology*, 2024.

[J1] C. Park\*, S. Choi\*, D. Kim, **S. Kim**, K. Han, S. Ahn, W. Lee, E. Choi, K. Keum, J. Kim. MRI radiomics may predict early tumor recurrence in patients with sinonasal squamous cell carcinoma. *European Radiology* **34**, 3151–3159 (2024). (\*co-first authors)

## WORK EXPERIENCE

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**Letsur** Jan 2024 - Present  
Research Intern (Mentor: Wonwoo Cho)

**Severance Hospital** Apr 2023 - Present  
Laboratory of Advanced Neuroimaging Biomarker Research (LANIB)  
Research Intern (Advisor: Sungsoo Ahn, Yaewon Park)

## RESEARCH EXPERIENCE

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**Korea University** Mar 2024 - Jun 2024  
Brain Reverse Engineering by Intelligent Neuroimaging (BREIN) Lab  
Capstone Design Student (Advisor: Joonkyung Seong)

**KAIST AI** Jan 2024 - Mar 2024  
Data and Visual Analytics (DAVIAN) Lab  
Basic Study

- Linear Algebra, CS229-Machine Learning, CS182-Deep Learning
- CS182-HW1, CS182-HW2, CS182-HW3
- **2nd place** in exam

**Sungkyunkwan University** Feb 2016 - Aug 2017

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B-ICT Lab

Research Intern (Advisor: Jounghwan Mun, Ahnryul Choi)

- Graduation Thesis: “Influence of Abnormal Foot Progression Angle on Adolescent Knee”

## PROJECTS

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### Comparative Analysis of SVMs and MLPs

Apr 2024

# SVM # MLP # CIFAR-10 # Hyperparameter tuning

### EHR Synthesis in OMOP CDM Using Diffusion Models

Mar 2024 - Jun 2024

# EHR # OMOP CDM # Diffusion model # Synthetic data

### FL-PoST

Dec 2023 - Present

# Federated Learning # Segmentation # Glioblastoma

### Neuro-QAI: Adaptive Learning in Noisy Label Environments

Dec 2023

# Q-Learning # Neuroimmune System # Noisy label

### Optimizing Training Procedures for Brain Tumor Segmentation

Dec 2023

# nnUNet # BraTS18 # Gaussian KDE # Optimal Cropping

### Comparative Study of IDH-Wildtype and IDH-Mutant Gliomas

Sep 2023 - Oct 2023

# Segmentation # IDH status # Low ADC Peak # Subventricular Zone (SVZ)

## INVITED TALKS

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### OVF Collapse Prediction: Model Architecture and Hyperparameters

5th Conference on Digital Convergence Research, Korean Neurosurgical Society

Jun 15, 2024

## SKILLS

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### English

- **TOEIC 975/990** (Valid until 2025/07/09)

### Algorithm

- **Passed** 2022 Kakao Blind Recruitment Algorithm Code Test