

# JINSEOK BAE

Interested in the data-driven approaches on physics-based character control and human-robot interaction.  
Current at the PhD course in **3D Vision Lab**, Seoul National University.

## CONTACT

- capoo95@snu.ac.kr  
 +82 10 5279 7144  
 1, Gwanak-ro, Gwanak-gu, Seoul  
 @jinseokbae

## SKILLS

### Programming

Python	
C++	
JavaScript	
Matlab	
Java	

### Operating Systems

Linux	
Windows	
Mac	

### Software & Tools

PyTorch	
Jax	
Tensorflow	
Isaac Gym	
Brax	
Webots	
Mujoco	
OpenGL	
WebGL	
Blender	
Unity	
ROS	

### Languages

Korean	
English	
OPIc (AL level, 2021.09.25)	

### Japanese

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## CURRENT INTERESTS

- Deep Reinforcement Learning
  - multi agent RL
  - offline RL
- Generative Models
  - diffusion models
  - VAE
- Robots
  - multi-robot control
  - shared autonomy
- Physics-based Animation
  - human-object interaction
  - whole-body control
  - large scale motion learning
- 3D Vision
  - neural rendering
  - shape generation

## EDUCATION

- 9/2022 - 8/2025 (expected)  
 Seoul National University **Ph.D** in Electrical and Computer Engineering  
GPA: 4.18/4.3
- 3/2020 - 2/2022  
 Seoul National University **M.S.** in Electrical and Computer Engineering  
GPA: 4.18/4.3
- 3/2014 - 2/2020  
 Seoul National University **B.S.** in Biosystems Engineering  
**B.S.** in Electrical and Computer Engineering  
GPA: 3.9/4.3 (*Summa Cum Laude*)

\* military service completed (2/2016 - 2/2018)

## ⚙ WORK EXPERIENCE

- 01/2022-07/2022  
 LG AI Research Digital Human Team, Vision AI Module  
human motion generation
- 01/2019-02/2019  
 Samsung Electronics (Intern) Health H/W development, Mobile Division  
circuit design, c++ tools for debugging

## 🏛 SCHOLARSHIPS

- Merit-based Scholarship (18'-fall, 19'-spring/fall), Seoul National University
- Agricultural Engineering Systems Scholarship (15'-spring/fall, 18'-spring), Agricultural Engineering Systems Scholarship Foundation

## 🏆 AWARDS

- ICRA 2023 Simulated Humanoid Wrestling Challenge  
 Team Yeti (Jinseok Bae, Donggeun Lim, Minseok Kim, Young Min Kim, Jungdam Won)  
 2023 3rd Place  
 [match](#), [video](#)  
keywords: robot control, deep RL

## 📝 TEACHING EXPERIENCE

- 2021 Summer  
 Seoul Nat'l Univ. 3D Computer Vision Track for AI Experts (Samsung) (T.A.)
- 2020 Spring  
 Seoul Nat'l Univ. Signals and Systems (T.A.)
- 2018 Summer  
 Seoul Nat'l Univ. Korean Course for Exchange Students from Keio Univ. (T.A.)

## 🖌 ACADEMIC ACTIVITIES

- Conference Reviewer (AAAI 2023, ICCV 2023)

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## PUBLICATIONS

### Dynamic Mesh Recovery from Partial Point Cloud Sequence

 Hojun Jang, Minkwan Kim, **Jinseok Bae**, Young Min Kim

 2023  ICCV

 [paper](#),  [video](#)

keywords : 3D vision, kinematics learning

### PMP: Learning to Physically Interact with Environments using Part-wise Motion Priors

 **Jinseok Bae**, Jungdam Won, Donggeun Lim, Cheol-Hui Min, Young Min Kim

 2023  SIGGRAPH

 [paper](#),  [video](#)

keywords : physics-based animation, deep RL, whole-body control

### Neural Marionette: Unsupervised Learning of Motion Skeleton and Latent Dynamics from Volumetric Video

 **Jinseok Bae**, Hojun Jang, Cheol-Hui Min, Hyungun Choi, Young Min Kim

 2022  AAAI Conference on Artificial Intelligence (AAAI), Oral

 [paper](#),  [video](#)

keywords : unsupervised learning, 3D vision, kinematics learning

### Auto-rigging 3D Bipedal Characters in Arbitrary Poses

 Jeonghwan Kim, Hyeontae Son, **Jinseok Bae**, Young Min Kim

 2021  European Association for Computer Graphics (Eurographics) short paper

 [paper](#),  [video](#)

keywords: neural rigging/skinning, pose estimation

### GATSBI: Generative Agent-centric Spatio-temporal Object Interaction

 Cheol-Hui Min, **Jinseok Bae**, Junho Lee, Young Min Kim

 2021  IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Oral

 [paper](#),  [video](#)

keywords: unsupervised learning, video prediction, representation learning

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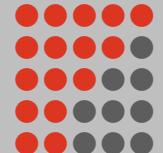
 1, Gwanak-ro, Gwanak-gu, Seoul

 [@jinseokbae](#)

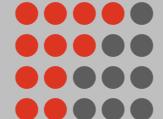
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C++



JavaScript



Matlab

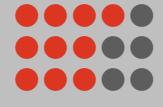


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