

# Jinwoo Baik

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## EDUCATION

**University of California, Los Angeles**

Aug 2024

Master of Engineering

**University of California, Los Angeles**

Jun 2023

Bachelor of Science in Computer Science | Bachelor of Arts in Physics

## EXPERIENCE

**Undergraduate Researcher**, UCLA Artificial General Intelligence Lab

May 2022 - Jan 2024

- Investigated the effectiveness of a novel machine learning model that captures continuous interactions among multi-agent systems using graph neural networks
- Huang, Z., Hwang, J., Zhang, J., **Baik, J.**, Zhang, W., Gu, Q., Wodarz, D., Sun, Y., & Wang, W. Causal Graph ODE: Continuous Treatment Effect Modeling in Multi-agent Dynamical Systems. The Symbiosis of Deep Learning and Differential Equations (DLDE) workshop at NeurIPS, 2023 | The Web Conference (WWW) - Web4Good, 2024 <https://doi.org/10.48550/arXiv.2403.00178>

**Software Development Engineer Intern**, Amazon

Jun 2022 - Sep 2022

- Developed diagnostic software to display internal states of Amazon Alexa devices for debugging
- Analyzed the health of the internal audio pipelines of Alexa and Echo devices by detecting audio corruption and audio frame drops

**Education Statistics Intern**, American Institutes for Research

Jul 2021 - Sep 2021

- Analyzed results from the National Assessment of Educational Progress (NAEP) to track trends about academic performance across various demographic groups
- Implemented the XES standard in R for internal use

**Undergraduate Researcher**, Elegant Mind Collaboration @ UCLA

May 2020 - Sep 2021

- Coordinated a student group and developed Arduino and Python code for research and analysis
- Alfifa U., ..., **Baik J.**, ... et al. Visual Perception of 3D Space and Shape in Time - Part 1: 2D Space Perception by 2D Linear Translation <https://doi.org/10.1101/2022.03.01.482161>

**Research Intern**, MIT Research Laboratory of Electronics

Jun 2018 - Aug 2018

- Developed a Java program to generate phoneme and acoustic cue labels to augment speech data
- Huilgol S, **Baik J**, Shattuck-Hufnagel S. A framework for labeling speech with acoustic cues to linguistic distinctive features. The Journal of the Acoustical Society of America. 2019 Aug 26;146(2):EL184-90. <https://doi.org/10.1121/1.5121717>

## PROJECTS

**Music Language Model**

github.com/jbaik1/Music-LM

- Trained a GPT model from music using BPE for tokenizing
- Generated music samples with logical chord progressions and rhythms

**N-Body Navigation**

github.com/jbaik1/n-body-navigation

- Created an RL agent to navigate complex n-body environments