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., Wodarz, D., ... & Wang, W. (2024, May). Causal Graph ODE: Continuous Treatment Effect Modeling in Multi-agent Dynamical Systems. In *Proceedings of the ACM on Web Conference 2024* (pp. 4607-4617). 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
- Monitored the status of the internal audio pipelines of Alexa 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. *bioRxiv*, 2022-03. 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. (2019). A framework for labeling speech with acoustic cues to linguistic distinctive features. *The Journal of the Acoustical Society of America*, *146*(2), EL184-EL190. 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