Hongseok Oh

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Experienced AI Research Engineer with 3+ years in audio and speech deep learning at a startup. Currently pursuing a Master's in Computer Science and Engineering at UCSD to advance my career in AI/ML.

WORK EXPERIENCES

Deeply Inc.   May 2020 - Jul. 2023
AI Research Engineer (Intern: May 2020 - Oct. 2020)   Seoul, Republic of Korea

- Conducted two deep learning-based research projects, leading to an academic paper submission to ICASSP and achieving a robustness gain against noise and reverberation of at least 47.5% for all subsequent products
- Developed over 10 deep learning models with PyTorch, resulting in 3 service launches and 4 demos, playing a pivotal role in our company's successful strategic shift from the B2C market segment to a B2B-focused approach
- Maintained and fine-tuned an elderly monitor system and casino surveillance system, reducing false positive rate to 0.1 - 1.0% while enhancing F1 score by 2.0 - 8.0%; which directly translated to reduced false alarms for monitors
- Designed and led government-funded AI data collection projects, generating $115k in total sales revenue [**Link**]
- Trained human nonverbal vocalization classifier and infant cry sentiment classifier [**Link**] with TensorFlow

EDUCATION

University of California, San Diego   Sep. 2023 - Jun. 2025 (Expected)
Master of Science in Computer Science and Engineering   San Diego, CA, United States

- **Concentration**: Artificial Intelligence
- **Major courseworks**: Probabilistic Reason&Learning, Computational Robust Statistics, Rec Sys&Web Mining

University of California, San Diego   Dec. 2018 - Jun. 2019
Education Abroad Reciprocal Exchange Program   San Diego, CA, United States

- **GPA**: 3.57/4.0
- **Major courseworks**: Data Science in Practice, Intro/Computer SCI: JAVA(1)

Yonsei University (Korean Ivy League School)   Mar. 2014 - Feb. 2022
Bachelor of Science in Information and Industrial Engineering   Seoul, Republic of Korea

- **GPA**: 3.59(3.87[†])/4.0 ([†] Last 2 Years GPA)
- **Major courseworks**: Optimization in Artificial Intelligence, Advanced Programming, Industrial Data Management

SELECTED PROJECTS

Audio Domain Adaptation Through Microphone Conversion   Oct. 2022 - Jul. 2023

- **Technologies**: CycleGAN, domain mismatch, data augmentation, Python, PyTorch
- **Description**: Built a generative model simulating microphones' properties without modifying acoustic information
- **Impact:** Submitted work to ICASSP 2024 that outperforms existing SoTA by 5.2-11.5% in F1 score

Respiratory Sound Classification for Elderly Monitoring System [Link]   Nov. 2021 - Mar. 2023

- **Technologies**: Transfer learning, knowledge distillation, Audio Spectrogram Transformer, Python, PyTorch
- **Description**: Developed a sound event classifier with a pre-trained Transformer for elderly health monitoring
- **Impact**: Boosted inference speed by 80% via knowledge distillation, aiding real-time monitoring for 300+ elders

SKILLS

Technical	• Python
	  ‣ Deep learning framework: PyTorch, TensorFlow, Keras
	  ‣ Digital signal processing & Image processing: Torchaudio, Torchvision, Librosa
	• Bash, Git, SQL, GCP

Language	• **Korean**: Native | **English**: Full Professional Proficiency | **Spanish**: Conversational
Interest	• CrossFit (8th year athlete), Bouldering (V4), Scuba Diving (PADI Advanced)