

JONG WOOK KIM

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Employment

OpenAI

MEMBER OF TECHNICAL STAFF

San Francisco, CA

Aug 2019 - Present

- Developed and open-sourced multimodal AI models such as Jukebox, CLIP, and Whisper, and built the Whisper API
- Participated in data engineering for GPT-4 with vision and continuing research on multimodal large language models

Spotify

RESEARCH SCIENTIST PHD INTERN

New York, NY

Jun 2018 - Aug 2018

- Integrated CREPE pitch estimator for music feature extraction and developed a music synthesis algorithm with controllable timbre

Pandora Media

RESEARCH SCIENTIST INTERN IN MUSIC INFORMATION RETRIEVAL

Oakland, CA

Jun 2017 - Aug 2017

- Developed a music recommendation algorithm for modeling individual listeners' tastes

Kakao

RECOMMENDER SYSTEM ENGINEER & DATA SCIENTIST

Seongnam, Korea

Jun 2014 - Aug 2015

- Developed Spark applications and distributed servers for recommender systems, as well as a framework for easier Spark development
- Designed a functional stream processing framework based on Kafka, with real-time metrics collected using OpenTSDB and Grafana

NCSOFT Corporation

SOFTWARE ENGINEER

Seoul & Seongnam, Korea

May 2011 - Aug 2011, Aug 2012 - Jun 2014

- Developed a distributed fault-tolerant backend for Lineage Eternal, built using Netty/RxJava and Boost ASIO for nonblocking IO

Education

New York University

PH.D. IN MUSIC TECHNOLOGY, ADVISOR: JUAN PABLO BELLO, GPA 3.76/4.00

New York, NY

2011 - 2012, 2015 - 2019

- Dissertation: Automatic Music Transcription in the Deep Learning Era: Perspectives on Generative Neural Networks

University of Michigan

M.S. IN COMPUTER SCIENCE AND ENGINEERING, ADVISOR: GEORG ESSL, GPA 7.76/9.00

Ann Arbor, MI

2009 - 2011

Korea Advanced Institute of Science and Technology

B.S. IN ELECTRICAL ENGINEERING (GPA 3.97/4.30) WITH A MINOR IN MATHEMATICAL SCIENCES (GPA 4.03/4.30), OVERALL 3.83/4.30

Daejeon, Korea

2006 - 2009

Selected Publications

Robust Speech Recognition via Large-Scale Weak Supervision

A. RADFORD & J. W. KIM ET AL., IN *Proceedings of the International Conference on Machine Learning (ICML)*

2023

Learning Transferable Visual Models From Natural Language Supervision

A. RADFORD & J. W. KIM ET AL., IN *Proceedings of the International Conference on Machine Learning (ICML)*

2021

Jukebox: A Generative Model for Music

P. DHARIWAL, H. JUN, C. PAYNE, J. W. KIM, A. RADFORD, I. SUTSKEVER, IN *arXiv Preprint arXiv:2005.00341*

2020

Adversarial Learning for Improved Onsets and Frames Music Transcription

J. W. KIM AND J. P. BELLO, IN *Proceedings of the International Society for Music Information Retrieval (ISMIR) Conference*

2019

Neural Music Synthesis for Flexible Timbre Control

J. W. KIM, R. BITTNER, A. KUMAR, J. P. BELLO, IN *Proceedings of IEEE ICASSP*

2019

Open Source Practices for Music Signal Processing Research

M. MCFEE, J. W. KIM, M. CARTWRIGHT, J. SALAMON, R. BITTNER, J. P. BELLO, IN *IEEE SPM Special Issue on Music Signal Processing*

2018

CREPE: A Convolutional Representation for Pitch Estimation

J. W. KIM, J. SALAMON, P. LI, J. P. BELLO, IN *Proceedings of IEEE ICASSP*

2018