

CHANGMIN JEON

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Seoul, Republic of Korea

Last updated: Sep 9, 2024

RESEARCH INTERESTS

- On-Device AI Systems
- Scene Understanding for XR Applications
- Synthetic Data Generation

EDUCATION

Seoul National University

Ph.D. Student in Computer Science and Engineering (*Advisor: Youngki Lee*)

Mar 2020 - Present
Seoul, Republic of Korea

Seoul National University

B.S. in Computer Science and Engineering

Mar 2014 - Feb 2020
Seoul, Republic of Korea

Seoul National University

B.S. in Mechanical Engineering

Mar 2014 - Feb 2020
Seoul, Republic of Korea

PUBLICATIONS

Mondrian: On-Device High-Performance Video Analytics with Compressive Packed Inference

Mar 2024

Changmin Jeon, Seonjun Kim, Juheon Yi and Youngki Lee

arXiv preprint 2024

Band: Coordinated Multi-DNN Inference on Heterogeneous Mobile Processors

Jun 2022

Joo Seong Jeong*, Jingyu Lee*, Donghyun Kim, **Changmin Jeon**, Changjin Jeong, Youngki Lee and Byung-Gon Chun

(* Both authors contributed equally to the paper)

Proceedings of the 20th Annual International Conference on Mobile Systems, Applications and Services (MobiSys '22)

ON-GOING PROJECTS

ODLIA: Optimization - Deep Learning Integrated Acceleration for Real-time XR Systems

Aug 2023 - Present

Changmin Jeon, Dongho Han and Youngki Lee

Existing deep learning acceleration techniques are not enough to enable highly fast (<10ms) scene understanding, such as hand-object tracking and semantic mapping. We enable a swift scene understanding system by modeling the pipeline into optimization - deep learning co-execution and jointly accelerating them.

OTHER PROJECTS

FallSim: Accurate Fall Detection with Synthesized Fall Motions

Mar 2023 - Present

Hyunwoo Jung, Jungnam Park, Taeho Kang, **Changmin Jeon** and Youngki Lee

VSense: Enabling Activity Recognition through Virtual Reality

Mar 2019 - Mar 2020

Hyunwoo Jung*, **Changmin Jeon***, Inseok Hwang and Youngki Lee

SKILLS

Programming Languages

C++, Python, Java, C, Rust, Kotlin

Familiar Softwares

Mobile Deep Learning Frameworks (e.g., TFLite, MNN)

TensorFlow, PyTorch, OpenCV, Android SDK, Unity

WORK EXPERIENCE

Nokia Bell Labs

Research Intern

Topics: Tiny AI Accelerator, Memory Management System

*Jun 2024 - Aug 2024
Cambridge, United Kingdom*

EQUALKEY

Software Development Intern

Topics: Knowledge Graph Generation, Educational Game Development

*Dec 2018 - Feb 2019
Republic of Korea*

Republic of Korea Army

Military Service (Sergeant)

*May 2016 - Feb 2018
Republic of Korea*

ACADEMIC SERVICES

IMWUT 2022 (May 2022 round)

External Reviewer

INVITED TALKS

Mondrian: Edge-Enabled High-Performance Video Analytics with Compressive Packed Inference

A3 Foresight Workshop: International Joint Workshop on Intelligent IoT Key Technology 2023

Sep 2023

HONORS & AWARD

Best Teaching Assistant

SNU & Samsung Data Science Course: Machine Learning (1st among 44 TAs)

Mar 2023

GRANTS

National Science & Technology Scholarship (\$20000)

Mar 2014 - Feb 2020

TEACHING ASSISTANT

SNU & LG Data Science Course: Machine Learning

Jan 2024 / Jan 2023 / Jan 2022 / Jan 2021 / Feb 2020

Machine learning theory and practice with *An Introduction to Statistical Learning*

SNU & Samsung Data Science Course: Machine Learning

Jul 2023 / Mar 2023 / Mar 2022 / Aug 2021 / Feb 2021 / Aug 2020 / Feb 2020

Machine learning theory and practice with *An Introduction to Statistical Learning*

SNU & Samsung Data Science Course: Machine Learning Projects

Machine learning projects with *Kaggle*

Oct 2023 / Jun 2023

SNU & SK Hynix ML Engineer Course: Time Series Data Analysis

Linear & non-linear models, hidden markov model, filtering methods, and deep learning models

Aug 2022 / Nov 2022

SNU Big Data & Fintech Expert Training Course: Fintech Industry Application

Mobile deep learning & machine learning application development

Apr 2021

SNU Computer Programming (M1522.000600)

Object oriented programming in java & C++

Fall 2020

SNU Mobile and Ubiquitous Computing (M1522.003300)

Activity recognition, localization, health care, power optimization, cloud and edge systems

Spring 2020