

학부생 연구기회 프로그램 (UROP) 공고

◆ 담당교수 : Bernhard Egger	◆ 연구실명 : Computer Systems and Platforms Laboratory
◆ UROP 연구 과제명 : CNN Compiler for Edge Devices	
◆ 모집대상 : 제한없음	
◆ 모집기간 : ~ 2020년 6월 말	

Project Overview:

Convolutional neural networks (CNNs) are widely used for image processing. To increase the accuracy or reduce its parameter size for efficiency, CNNs are evolving into more complex and deep networks. At the same time, a large number of dedicated CNN accelerators are being proposed and implemented composed of a number of processing elements (PEs) and limited on-chip memory.

Concurrently, there is an increasing general demand to deploy neural models onto resource-constrained edge devices due to efficiency, connectivity, and privacy concerns. Generating efficient CNN algorithms of various CNN composed of many nested loops on a specific accelerator, especially for resource-constrained edge devices, is tedious and error-prone task.

In this project, we will develop the compiler to generate an optimized code of various CNNs on edge devices which are the development board consist of micro controller processor.

Requirements:

- Basic knowledge in CNNs



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