



(a) The deployment of CNN backbones. At **compilation** step, INCAME locates the interrupt location, adds virtual instructions and genterates the virtual-instruction ISA Sequence. At **runtime**, IAU translate the virtual instruction ISA sequence to original sequence executed on the accelerator.

(b) The INCAME framework. At **task decomposition** step, the operations in different ROS nodes are seperated to CNN backbones, CNN Post-Processing, and Other CPU Tasks. At **computaion deployment** ,the CNN backbone and Post-Processing are deployed with hardware modules and software optimizing.