**Cerebras SDK technical overview**

* Programming model
  + CS-2 system already supports frameworks like PyTorch and Tensorflow
  + Cerebras SDK allows programmers to write lower-level code to target WSE’s microarchs
  + Host CPU (python) targets groups of cores on the WSE, specified by the programmer
  + programmer to specify the communication paths through the on-wafer network for data communication within each group and between the groups
  + **Data movement**: in 32-bit packets called wavelets
    - Each wavelet is tagged with a 5bit virtual channel (color)
  + **Syntax**: similar to C/C++
    - Types, Functions and control structures
    - Modules: allows to import other CSL files
    - Tasks: Implements dataflow programs (mapped to colors)
      * Two ways to trigger a task
        + On incoming wavelet color
        + Programmatic activation and unblock
  + Instructions work on tensors whose operands are specified in data structure descriptors (DSDs)
    - Data structure registers (DSRs) are used to hold DSDs
* Simulator
  + Apparently cycle-accurate
  + Allows for debugging