Dylan Rankin

University of Pennsylvania
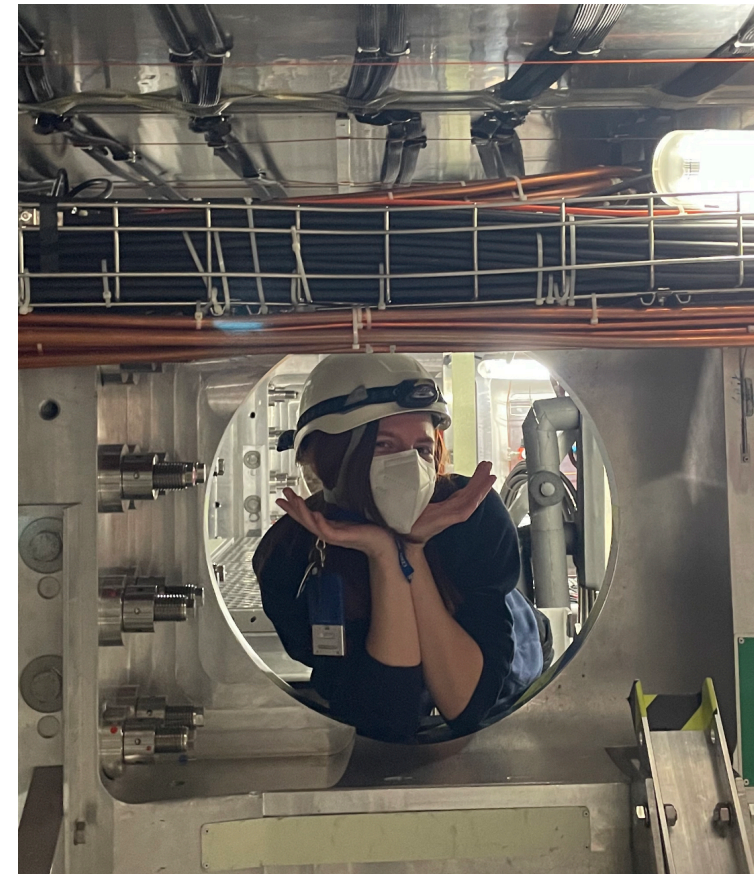
Group Members
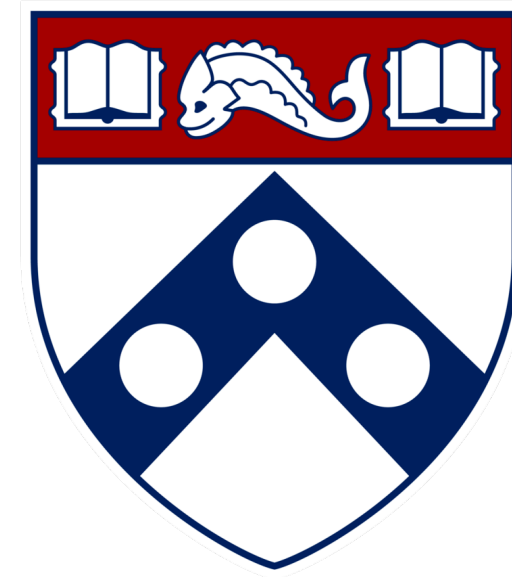
- Graduate students (left to right):

  - Gwen Gardner

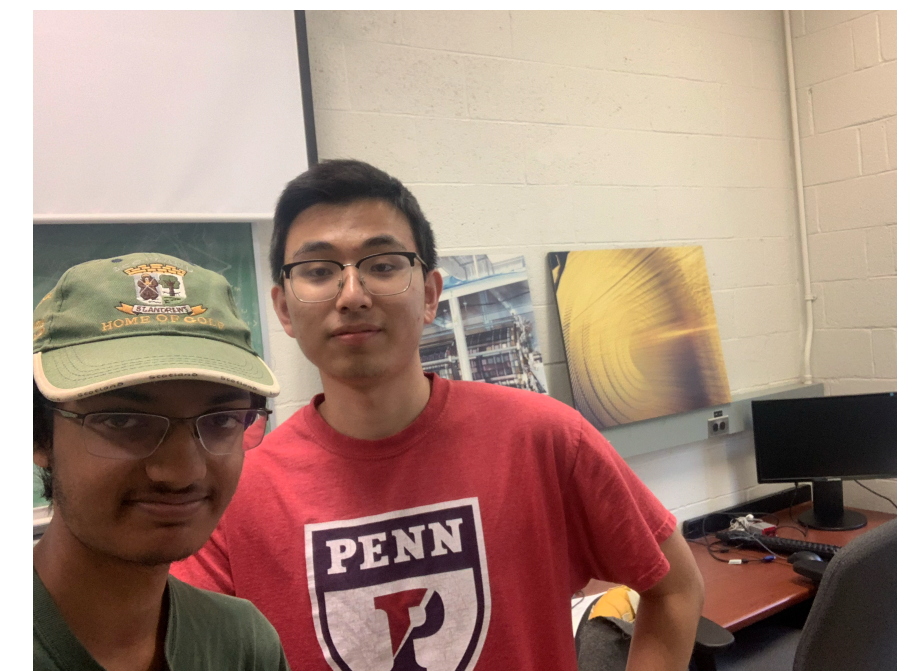 - Max Cohen (incoming)

- Postdoc:

  - Open [AJO]

- Undergraduates (left to right):

  - Anirudh Bharadwaj, Kevin Wang, Ethan Yu

- Large ATLAS group & instrumentation group at UPenn

Research Areas (Fast ML)

- ATLAS Level 1 trigger algorithm development

  - Expect low latency ML to be critical in HL-LHC

  - Muon p_T regression, anomaly detection (AD), topological triggers, dedicated low level triggers (ex. timing, pointing)

- hls4ml development (core layer optimization, novel architectures)

  - Parallel CNNs, sparse CNNs, ~GNNs

- Heterogeneous computing

  - FPGAs-as-a-service (FaaST), acceleration