

Week 9
Challenges
ECE 410/510
Spring 2025

Instructions

- The challenges below are for you to delve deeper into the subject matter and to test your own knowledge.
- I'd suggest you try to solve at least one problem per week. More is obviously better.
- Practice “vibe coding” if necessary.
- Post your solution(s) in the #weekly-challenges Slack channel so everybody can appreciate what you did, ask questions, and make comments.
- Document everything for your portfolio and make your code available on Github.

Challenge #26: BrainChip's IP for Targeting AI Applications at the Edge

Learning goals:

- Learn more about BrainChip's approach to build IP cores and market their Akida chips for AI applications at the edge.
- Learn more about BrainChip's *Temporal Event-based Neural Network* (TENN) architecture and how that benefits AI at the edge.

Tasks:

1. Listen to the EETimes BrainChip podcast (47min) at <https://www.eetimes.com/podcasts/brainchips-ip-for-targeting-ai-applications-at-the-edge>
2. Put what you learned in perspective in a short write-up. In particular, compare the BrainChip approach to GPUs and other neuromorphic chips that we have seen in class.