NOTE

Project selection

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- Project list:
  - A list of projects along with the associated research paper and source code will be provided
  - We will also provide the necessary hardware to accomplish the project
  - Each project will also be mentored by a staff member at the chair
- Project assignment:
  - FCFS bidding process
  - 3-4 students per project
  - Please indicate your preference by semester's 1st week

Guidelines for paper reading

The project will be accompanied by a research paper. To understand the paper, please follow Keshav's three-pass approach (see references)

- First pass: Get the general idea (5-10 minutes)
  - Read the abstract, introduction, conclusions
  - Check section headings, and references
- Second pass: Grasp the paper's content (1 hour)
  - Read the full paper, ignore proofs/details
  - Carefully read the figures, identify key points
  - Mark important references
- Third pass: Understand the paper in depth (4-5 hours)
  - Try to understand everything and reconstruct the approach
  - Be critical, challenge assumptions, validate the state-of-the-art
  - Possible generate your own ideas

References

- How to read a paper
  - S. Keshav: How to Read a Paper
    - http://ccr.sigcomm.org/online/files/p83-keshavA.pdf
  - Philip Fong: How to Read a CS Research Paper
    - http://www2.cs.uregina.ca/~pwlfong/CS499/reading-paper.pdf

Guidelines for understanding the code

The project will be accompanied by a source code. To understand the code, please follow a three-pass approach (see references)

1. Reproduce:
   a. Build/run it
   b. Confirm factual claims of the paper (Does it work?)
   c. Reproduce measurements of core claims (Are numbers plausible?)
2. Extend measurements:
   a. Do your own (micro-)benchmarks/profiling/…
   b. Get a deeper understanding of performance or subject of measurement
3. Extend code: implement your own ideas based on the project

Real-world artifact-review guide: https://sysartifacts.github.io/eurosys2022/guide

References

- System artifacts:
  - https://sysartifacts.github.io