

ECE574: Cluster Computing – Homework 1

Due: Thursday 23 January 2025, beginning of class

Be prepared to share the results of this homework in class on Thursday.

Also please e-mail the answers to me (plain text, pdf, or word document) for grading purposes.

First, if possible, watch some of this year's Top500 list BoF session from Supercomputing. You can skip the first 14 minutes. The two parts from 14:00 to 23:00 and from 35:00 to 1:03:00 are the parts most relevant to this class.

<https://www.youtube.com/watch?v=dkgFvrhhD8U>

Feel free to watch the whole thing, but it is a bit long.

Next, go to the Top500 Supercomputer site www.top500.org, find the November 2024 list (from the LISTS / Top500 pulldown), and research the background of the supercomputer in the slot number I handed out in class. If you missed class, let me know, and I can send you a number. Note: the website can be hard to navigate. Click on "The List" sidebar to find machines beyond 1-10.

Report the:

1. Name
2. Location (Country)
3. Processor Architecture (x86/power/ARM/etc)
4. Processor Type
5. Total number of Cores
6. RMax/RPeak
7. Power Consumption
8. Any accelerators (GPUs, XeonPhi, etc)
9. Any interesting info you can find on this machine (you can use sources other than top500.org)

As noted, in addition to sending me an e-mail with your results, please bring the info you gathered to class on Thursday, as we will discuss your findings during class.