

L50 — Instructions For Final (Second) Report

Prof Andrew W. Moore

Last modified November 2024/25

1 Objective

The tasks of this submission are focussed upon recreating the experiments of the paper by Zilberman *et al.* “Where did my time go?”, published in 2017.

Specifically I want you to focus upon the experiments (documented in Table 1 of the paper) referred to as 1a, 1b, 1c, 2, 4, and 6a. You may optionally attempt 7a and conduct an equivalent of 7a for the Intel NIC.

All other experiments are out of context.

This should mean you exclude any experiments regarding VMs, external switching equipment, special NetFPGA images (that you have not used this term), applications, or NIC offload facilities.

For each experiment, as you are able to recreate the measurements, contrast the results of the paper with your own experience and outcomes. Report, discuss, compare and contrast, then draw conclusions for each of these sets of comparative experiments.

The road to replication is not an easy one – please take some time to identify challenges (and, if they exist, roadblocks) to completing this work.

Report your results, compare and contrast these with your expectations. Make clear your expectations, the differences between those, the original paper, and your practical experience – discussing what caused these differences. You may wish to test your hypothesis as time permits.

1.1 Sharing is caring; sometimes.

The work of repeatability is not trivial. You will be particularly messed about by equipment or experiment issues. To ensure you each make progress:

1. You may share results with your partner,
2. you are encouraged to share tool and kernel successes with others in the class, but
3. your words, report, and interpretation must be your own.

2 Structure

Aim for a maximum of 5000 words – I’d estimate this to be **approximately 20 pages** including graphs and so forth.

A scientific method outline is suitable – see the lab report1 guidelines or the sample report1.tex for section names; once again you may wish to have aim(s)/objective, equipment, results, discussion and conclusion section for each part of Lab 4 and Lab 5 or you may find it more sensible to combine all results and discussion within a single report structure.

Please don’t be constrained by the suggested headings; consider them a guide to ensure you remember to include all the graphs and results, to discuss all the results specifying when the results support your initial assumptions, and discuss why it is when results fail to support your expectations.

Finally, please remember a conclusion is not a summary; a conclusion is used in several ways (one or more of these things): to highlight an interesting and relevant result, to identify a key finding from the discussion, to draw together a set of findings when they support a more significant conclusion, note wherever your initial aim is supported, or not.

Don’t fret about pages; focus on word count if you need a guiding target. Additionally, provided you make clear your crsid/name you may wish to use another style such as the **IEEEtrans**, famous for being compact (utilising dual columns.)

Do **NOT** be tempted to reduce the font size. I have decaying eyes.

3 Quick Feedback from past years reports

Use this information to improve your final report (specific (personal) feedback for each of you will follow shortly after submission; given the weird timings this year, this is intended as a quick set of observations to help you on your way.)

A few weaknesses:

- Despite many statements about the measurement, often it is not clearly stated what is being measured and what is expected
- Failure to clearly state conclusions, including what was observed how it differed from what was expected, and your own **opinion** on why that was.
- Failure of the observed data to support the discussions’ conclusions.
- Diagrams without sufficient text stating what we are looking at and why – remember it is good practice to reference every table, and every figure from within the text of the lab report.
- Figures missing fundamentals: e.g., missing title, missing keys, missing units.

A few things to remember:

- Include references to all figures within the report; and attempt to force figures to be adjacent to the first reference in the text (try using the argument `\begin{figure}[h]` **h** for **here**)
- Use proper scale, adapt the template if need be – be particularly careful of using scaled-down figures as this also means scaled-down fonts: adapt (oversize) any figure font size before scaling down.
- Be reassured you are recreating and replicating the experiments – not reproducing them. You are making, where possible, the same measurements of the paper but on your own equipment.

- Do not make assertions instead ensure your claims are supported by evidence from experimentation

Discuss (and as appropriate) contrast the results in depth by:

- Compare and contrast results you believe represent the same intended measurement
 - Provide side-by-side comparisons with what you expect and what the reference paper achieves.
- Use the correct terminology (accuracy, precision, resolution)
 - Correct typos and grammar mistakes
 - If/where necessary, annotate your figures; **Yes! Use an editor** and draw an arrow/circle/large letter A as needed. This makes a readers life much easier as you can refer to *the big A on Figure XYZ*
 - The target audience of your report is someone starting Part III/ACS (aka yourself at the beginning of the course.)

4 End

Try always to keep a sense of wonder, try stuff, and tell the reader about your successes and, as appropriate, your failures too. Finally, don't be hipster Flanders. Thank you all.