121.5

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0 Intro

This is the collection of lecture notes for the advanced 121.5 section of Harvard's CS121. The sections are numbered and organized based on the course schedule for Fall 2021. There will be a mix of technical lectures and talks by people currently working on interesting problems.

Some parts may be highlighted for reference:

TODO

Pause and ask

0.1 Who am I?

I'm currently a last semester senior at Harvard studying Computer Science. My qualification (if you can call it that) for talking about these topics is taking classes and thinking about things.

0.2 Goals

My goals for the section are roughly twofold:

- TCS Literacy - After attending these talks, hopefully students will be able to listen in on conversations between people doing work in TCS

and be able to roughly understand what field they're working in and the kinds of questions that field is asking.

- TCS Exposure - In talking about a wide range of topics in TCS, hopefully I can help students who are interested in the academic track to make more informed decisions about what research directions they'd want to pursue in the future.

0.3 Assumed prior knowledge

Each section of these talks has some set of assumed prior knowledge. For example, in talking about linear ECCs we naturally assume familiarity with how matrix multiplication works.

At the beginning of each lecture I'll list out all the prior knowledge I'm assuming for that lecture and give attendees a chance to ask for a crash course on the prior knowledge, should they need some review or clarification before diving into the main content of the lecture. Questions about prior knowledge are also more than welcome during lecture.

0.4 Volume

Each section is written with the intention of being taught in a 1 hour lecture style talk to undergraduates.