Short term goals

Ada

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1 Introduction

This month is going to be crucial for a lot of reasons, finals will also be around the corner mid december so i am trying to explore further readings closely related to the subjects i am studying currently; there are a few outliers tho but i think it is fine. Also, this is not meant to be all done in a month, i would hope i would be able to do the unirelated stuff this month tho! So I will definitely update it as the time goes by. Note that this is highly ambitious and i am aware of that, but i learned that if my expectations are high enough, i get to do more which i like!

2 This month goals

2.1 Complex analysis

i hope i can get to understand picard's theorems, the smoll one seems manageable, for the big picard theorem, i found an exam that guides through one of its proofs, so I will be doing that once I know the theory!

2.2 measure theory

Like one of the cool things mentioned is how if you have two polish spaces with their sigma-algebras, if you have a measurable bijection between two borel sets, then its inverse is measurable I want to learn a thing or two about ergodic theory but that would realistically be for another time, his lecture notes are actually crazy cool with a lot of cool extensions and even introduction to actual recent discoveries and further readings and i hope i can read and go through all of it! like one of the cool things mentioned is how if you have

2.3 Dynamical systems

I'm halfway done with an intro book about it and i need to give it back in 10 days so i need to resume it ;-;

2.4 Concurrent programming

:) also need to fix whatever is wrong with my knuth-bendix implementation eventually

> In general i want to go as far as i can in all the subjects I'm currently learning! And answer the open questions some profs give or that i might have along the way like if we can build a notion of completeness without a metric etc

3 Things on the horizon

3.1 extensions of things i liked from previous readings!

who knows where that will lead me

3.2 Category theory

This one is just because i absolutely need to get used to if i want to learn any further mathematics, I've found Richard E Borcherds youtube to be very instructive so far!

3.3 the return of representation theory

Yeah, tbh i just want to take my revenge from last year, found a good book in the library last week, so we will see.

3.4 algebraic topology/algebraic geometry

I've been wanting to learn about this for a bit! but never stuck to it mainly because of cat theory

3.5 Galois theory

This i can actually do this month (copium), i have a cool book that introduces the theory really well!