

Analytical Workflows

IB599

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Overview

Analytical
Workflows

Philosophy

Course
Outline

Website & Schedule

Syllabus

Accountabilibuddies

Accounts &
Apps

Zoom vs. Discord

Required

Project
Proposals

My Hope

1 Philosophy

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Course Principles

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Automation

Doing science involves repetition at multiple levels.
Automation is more efficient and reduces mistakes.

Reproducibility

Science should be reproducible, by others and you.
Your work must be *readable, organized, and self-contained*.

Correctness

Science's limitations are human. Software can overcome bugs.
Your science must be bug-free.

¹See Allesina & Wilmes 2019

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Simplicity

Analyses should be as simple as possible.
Clever and readable are often at odds.

Openness

Science is a worldwide endeavour.
It, and access to it, should be free and equitable.

Science as Software Development

Science has no end product, just versions and updates.
Software developers have tools to help.

¹See Allesina & Wilmes 2019

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<https://github.com/analyticalworkflows>

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- Weekly check-in
 - *goals/deadlines, accomplishments, sticking-points*
 - *final 10 min. of Thursday class*
- Randomized pairing
 - *via automated Zoom breakout rooms right now*
 - *re-randomized week 6*

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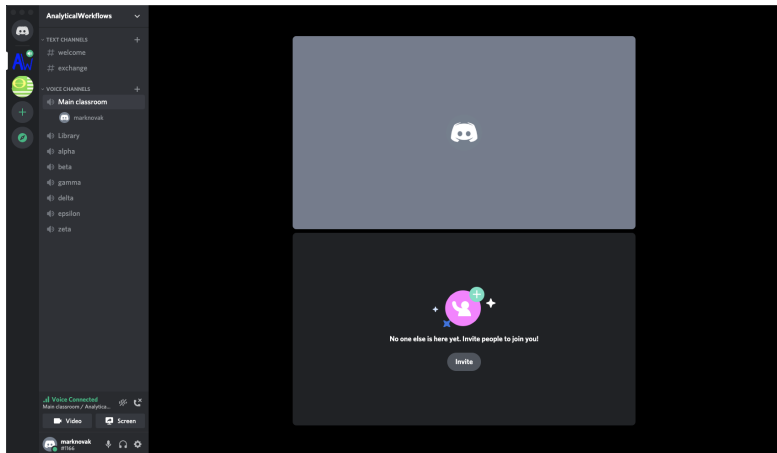
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To Zoom or not to Zoom?

Analytical
Workflows

<https://discord.com>



What you'll need

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Software

- Git
- L^AT_EX

Accounts

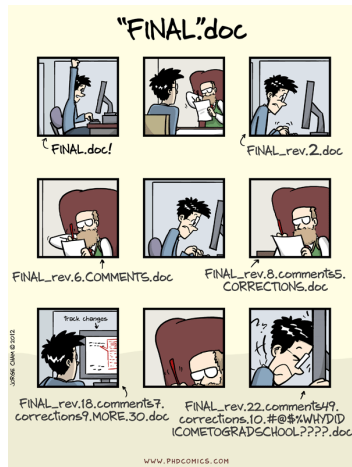
- GitHub¹

L^AT_EX editor

- Stand-alone (*TeXstudio*, *Atom*,...)
- Online (*OverLeaf*,...)

Git GUI (optional)

- Sourcetree



¹Please send me your username.

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Primary Goal

To develop more efficient research skills.

Secondary Goal

To make significant progress on your thesis.

Our belief

We can achieve both in this course!

Let's get started!

.../TeachingMaterials/classes/ProjectProposal

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We're all learning...

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My Hope

This is my first ever “remote” course.

This is my first ever \LaTeX Beamer presentation!

- Be kind to yourself
- Support each other

Integrity

Doing the right thing, even when no one is watching.