JRaviLab docs

For members of the JRaviLab: past, present, and future!

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About JRaviLab docs

This is a short e-book compiled to guide, onboard, and offboard JRaviLab members at the University of Colorado Anschutz Medical Campus (and Michigan State University).

Acknowledgments

We appreciate and build upon awesome onboarding group resources from Arjun Krishnan, Fan Zhang, Casey Greene, Annika Barber, Christoph Rau, Jeff Leek, and several others.

If you'd like to edit/update/contribute to this e-book (*built with Quarto*), please email me or submit a pull request to the GitHub repository directly.

How to reach us

Webpage | PI | Twitter | Mastodon | Email

1 Onboarding

Welcome to JRaviLab! We are excited that you are here — as a student, postdoc, or visiting researcher! We have a number of resources available in this short e-book and on Slack. Please take the time to check these out. As you read them, if something is unclear, please feel free to reach out to the group anytime.

Once you are done with the 'familiarizing' and getting to know the first steps, please send me (JR) a message on Slack. Please bring your questions, thoughts, and feedback to the meeting.

Good luck & welcome aboard!

2 Mission, Expectations, Conduct, Support

- Mission, expectations, code of conduct
- Health, wellness, safety
- Diversity, accessibility

Links and details to follow.

3 Lab Proceedings

- Working remotely | CU Remote Work Agreement
- Communication within the group | Slack | In-person/Zoom co-work
- Research update presentations
- Giving & receiving constructive feedback

Links and details to follow.

4 Slack

Since our lab runs on Slack, let's first get you on there. All our conversations & every last bit of science get done here! :) So, please install this on your desktops (phones) and turn on notifications during working hours, whenever that is!

4.1 Getting started

When you join, please introduce yourself in `#general`. Tell us a little about yourself here — where you are from, what your interests are, science-wise or otherwise, why you are interested in working with us, and in what capacity you'll be joining us.

I've never used Slack -- where do I even start? Maybe you can start with the Slack cheatsheet and Keyboard shortcuts.

4.2 What next?

Next, you can join the different channels to participate in various kinds of conversations with the group — look at the channel description, check out the pinned messages of the channel, and dive right in! Here are a few examples.

Finally, you will be invited to specific project channels (based on the primary and secondary projects you will be working on). Based on chats with your colleagues, if you'd like to contribute to/give feedback to other projects, feel free to join those channels too.

4.3 Meet the group

You may have briefly spoken to a few group members prior to joining. I urge you to take the first few weeks to introduce yourself to the group members and chat with them (via Slack or over coffee/tea) to find out what they are up to and learn a bit about the lab.

5 GitHub

If you haven't already, please create a professional GitHub account (e.g., `jananiravi`) with your full name. Once you pass that along to us, we will add you to the JRaviLab GitHub organization. Also, a neat memorable username will give you the opportunity to host your own webpage (e.g., `jravilab.github.io` or `jananiravi.github.io`). Our group repo is here.

6 Social media

If you have officially joined us as a grad or postdoc, or undergrad for 3/6+ months, you will automatically get added to our group webpage. If not, please check a few sample pages and furnish me with those details – I can add you there right away. Also, we use Twitter for professional networking & announcements (connecting with the broader scientific/R/technical communities). If you have a Twitter handle, share it with me (DM), or follow #auto-twitter for updates. You can check out/follow a few accounts maintained by us: JRaviLab | my handle | RLadies-EastLansing | Women+ Data Science | AsiaR | ISMB EvolCompGen COSI. Thanks to recent *interesting* changes at Twitter, people have been migrating to Mastodon (e.g., genomic.social, fosstodon)!

If you would like to co-maintain any of these accounts or our webpage, please DM me. I'm always looking for volunteers! :)

7 How to X | Learning Resources

7.1 Get started

If you are new to computational biology and R programming, join the `#bioinfo-primers` channel. Use the `#help-x` channels to ask for help/answer others' questions on R/Py programming, shell scripting, version controlling, or anything else that's general and not project-specific. Use the corresponding `#proj-x` channels for all project-related questions.

Check out the Slack tips in the pinned posts in #help-proj_management to get oriented since you are new to Slack (the channel used to be `#howto-slack`)!

To re-familiarize yourself with R/Python/Unix, check out these two resources in addition to Slack | CompBio gists and R-Ladies East Lansing. If you are new to R-Ladies East Lansing and Women+ Data Science, check them out and join Meetup and their Slack to remain apprised of upcoming events and to connect with the local R and data science communities.

If you find other useful resources, please add them to this list (or share them with me).

7.2 Learn R

To learn R, I would recommend getting started with the pinned posts in #courses-primers.

A couple of helpful GitHub repositories - https://github.com/jananiravi/workshop-tidyverse (Intro to `R's tidyverse package` — very useful to learn right away) - Other R workshop materials from our R-Ladies East Lansing chapter: https://github.com/rladies-eastlansing - Interactive tutorials with learnr & swirl. - R for Genomics from Data Carpentry - R on HPC

- Coursera
  - Intro to R programming and tidyverse
  - Data visualization and Dashboarding with R specialization
  - Getting Started with Data Visualization in R
  - … and more | explore by topic, duration, skill-level

Go-to books (also in pinned posts on Slack)

- R for Data Science (for tidyverse and such)
- Hands-On Programming with R (for base R) Intro to Git, GitHub resources

7.3 Use VPN

https://www.ucdenver.edu/offices/office-of-information-technology/software/how-do-i-use/vpn-and-remote-access

7.4 Learn Git/GitHub

- https://happygitwithr.com/ Happy Git and GitHub for the useR (connecting git/GitHub w/ R)
- Git and GitHub learning resources from GitHub
- Git 101
- Coursera Intro to Git and GitHub course

7.5 Read/write/present

- Read papers
- Make a poster
- Write a paper
- Writing in the Sciences on Coursera

7.6 Code

- Write, work with, and manage source code and data
- Prepare for and carry out code review
- Share data
- Write an R package
- DBMI software engineering team tips & tricks blog posts

7.7 Plan your semester/year

Templates on yearly/semester planning and professional development are available here.

7.8 Others

- Career development week
- Remote work | CU remote work policy | CU DBMI remote work agreement

8 Resources

8.1 Funding

We strongly encourage trainees to apply for scholarships/fellowships or other grants to help support their independent research and to get acquainted with the process of developing competitive research and personal statements.

Here are a few scholarship and funding opportunities:

8.1.1 Grad students

- Graduate student funding opportunities (c/o JHU)
- @CUDenver
- NSF GRFP
- NIH F30, F31
- Graduate tuition for in-state, out-of-state, non-resident, international students
- Immigrants vs resident aliens

8.1.1.1 Training grants

https://www.cuanschutz.edu/graduate-programs/biomedical-sciences-program/resources/grants-and-fellowships

8.1.1.2 AWIS

https://awis.memberclicks.net

8.1.2 Undergrads/postbacs

- Colorado Biomedical Informatics Summer Training Fellowship for URM Mail Caitlin Moloney with questions: caitlin.moloney@cuanschutz.edu
- Loan repayment program
- University of Colorado Anschutz Medical Campus Preparation in Interdisciplinary Knowledge to Excel (PIKE) PREP (URM + citizen + BS in biomedical field)
- For high school, undergraduate, and graduate/professional students

8.1.3 Postdocs

- Beautiful central resource maintained by JHU
- Postdoctoral fellowships for international scholars
- NIH F32, K99/R00

8.1.4 Other

- Anschutz Funding and Fellowships
- Ludeman Center for Women's Health Research

8.2 CU resources

8.2.1 Health and Wellness

CU Anschutz: Mental health| Health and Wellness Center

MSU: Mental health| Student Health & Wellness| Fitness

8.2.2 Women in STEM

8.2.3 DEIJAR

- Central Office of Diversity, Equity, Inclusion, and Community Engagement
- Office of Disability, Access, and Inclusion
- Office of Diversity and Inclusion
- DEI education, outreach, and recruitment

8.2.4 Writing Center at CU Anschutz

9 Meetings

Please update this semester's meeting schedule here.

9.1 Format

- Monthly group meetings, group socials, co-work sessions
- Monthly bioinfo/programming primers (w/ DBMI SET)
- Weekly project meetings
- Biweekly software engg meetings
- Biweekly/monthly collab meetings

9.2 Logistics

- GitHub issues/project for detailed project to-do's
- Shared Outlook Calendar for meetings, deadlines, RLEL & other events!
- Semester planning meeting (once per sem, during the first month)
- Slack for everything else!

9.2.1 Monthly Group Meetings

Fri: 1p MST / 3p EST

We usually go around the table and give quick 5min progress updates from the week before. Alternatively, we can schedule research updates/journal club presentations each month or host separate monthly journal clubs.

9.2.2 Co-work Sessions

For the whole group Fri: 1-2p MST / 3-4p EST

Bioinfo primer series Fri: 1–2.30p MST / 3–4.30p EST

9.2.3 Monthly Group Socials

Fri: 1p MST / 3p EST

- Random discussions/catch-up
- Online games: https://jackbox.tv | https://drawbattle.io
- Coffee/tea or ice cream for local folks
- Once in a while, we can dedicate the group socials to fun topics close to your heart (e.g., music, sports, books, food, …)!

9.2.4 Monthly/Weekly individual check-ins:

Book via Outlook bookings.

9.2.5 Project meetings (15min per person)

- Host response & frugrep | Fri 2p MST (biw)
- MolEvolvR/CompGenomics/AMR | Fri 11a MST (wk)
- START | Fri 3p MST (mon)
- Software engg | Wed 11a MST (biw)

9.2.6 Collaborations

- Staphylococci | Wed, 1p MST / 3p EST (biw) | w/ HammerLab (MSU)
- Disease gene expression | Mon, 11a MST / 1p EST (biw) | w/ KrishnanLab (CU)
- Legionella | Wed, 1p MST / 3p EST (mon) | weekly from 2023 | w/ ShamesLab (MSU)
- EEPID | TBD (biw) | w/ WaleLab (MSU)
- AMR omics | Wed, 3p MST (wk) | w/ ChatterjeeLab (UC Boulder)

10 Offboarding

We are delighted to have been a part of your research life. We wish you great laurels as you move on to the next phase of your career.

Please make sure you have checked these boxes before leaving our group.

- ☐ All your code is on GitHub
- ☐ All your processed data files/figures/reports (<100mb) are on GitHub
- ☐ Large data files (raw/processed) are on the server (and backed up)
- ☐ All your scripts and data files are well-annotated with appropriate `README` files
- ☐ Added detailed status report of where things – what was tried, what worked/didn't work, where the scripts/data files are, what remains to be done (within the scope of the project, and clear next steps)
- ☐ You have reoriented me and at least 1-2 other project members with the precise status (and next steps) of the project and location of files
- ☐ You are not a full member of the GitHub organization or Slack anymore but will retain access to the project channel/repo until publication.
- ☐ If you have worked with us for 3mo, you will remain a part of `#the-continuum` channel on our Slack.

Good luck!

10.1 Stay in touch

Webpage | PI | Twitter | Mastodon | Email