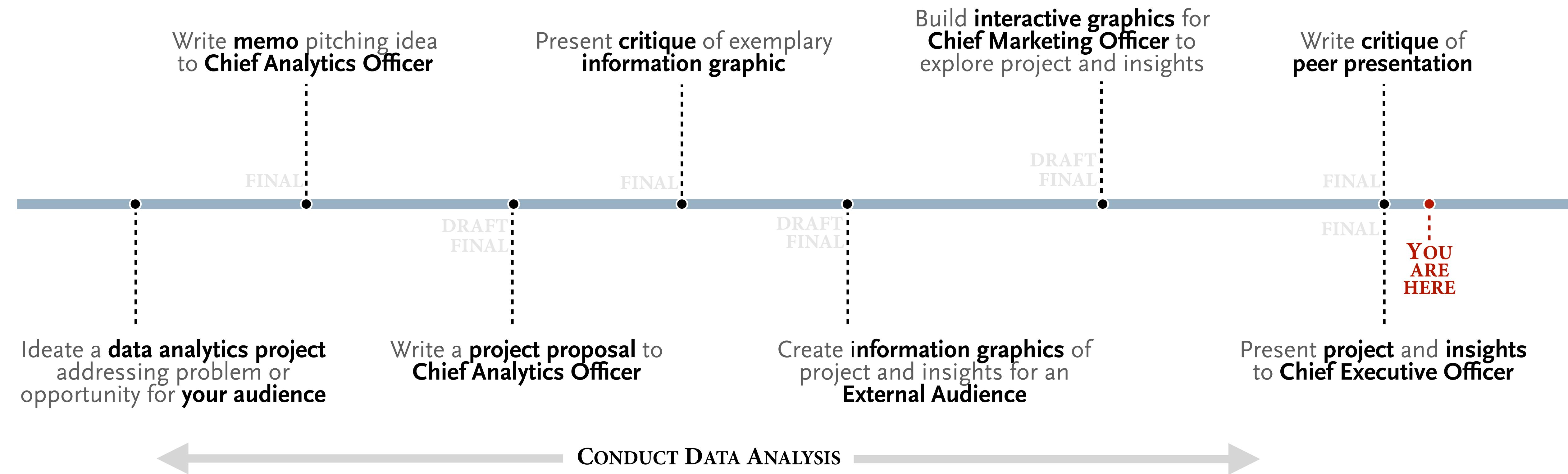


# Storytelling with data

13 | Processes of user-centered, content design — pair-wise prototyping

# course overview, main course deliverables



**course evaluations — improving *your* program**

# course feedback, why? — your thoughtful words help me help you!

Definitely, again, I want to use what you write to **advocate for you** and give you more of the type of guidance you found helped you.

**I listen**, learning what works, and keep updating my teaching material — *examples, visuals, code, textbook* — of which I **give you future access**.



Let's use this time to be thoughtful, and keep improving our alma mater — **I welcome you as a Columbian, too!**

The screenshot shows an email window with the following details:

**From:** Erik T. Nelson  
**Subject:** FAQs: Student Course Evaluations  
**To:** SPS-PTFACULTY@lists.columbia.edu <SPS-PTFACULTY@LISTS.COLUMBIA.EDU>  
**Date:** April 5, 2021 at 3:39 PM

This message is from a mailing list. Unsubscribe

Dear Faculty,

At the end of each semester, students are asked to complete course evaluations, which ask them questions about their opinions regarding the course and course design and of the instructional effectiveness of the Instructor of Record, the Course Associate, and the Teaching Assistant. The course evaluations serve the following purposes:

- Helping program directors and administrators identify courses that need to be updated or revised in order to be more professionally relevant to students.
- Providing feedback on the structure of a program's curriculum and identifying gaps in course offerings.
- Giving instructors feedback on instructional practices that are particularly helpful to students.
- Gathering suggestions from students on how instructors can better serve the needs of their students.
- Providing evidence of instructors' excellence in teaching and student support.

However, in order for course evaluations to be useful, students need to feel comfortable responding to them and giving open, honest feedback, and need to feel as though their input is valued. As the Instructor of Record of your course, you can have a huge impact in the quality and quantity of responses by explaining the purpose of course evaluations to your students, highlighting their importance, and providing time in class for students to participate.

All SPS Instructors of Record are expected to set aside at least 15 minutes of class time during the course evaluations window (April 12-25) to allow students to complete the evaluations.

Please review the attached document, which provides information about what the course evaluations are, how they are administered, and what happens with the results.

If you have any questions, please contact Zach Kornhauser, Senior Director of Assessment and Faculty Development, at [zk2124@columbia.edu](mailto:zk2124@columbia.edu).

Thank you,  
Erik

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**Dr. Erik T. Nelson**  
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Lecturer in Professional Studies  
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Email: [nelsone@columbia.edu](mailto:nelsone@columbia.edu)

Please **don't forget Laura**, she worked tirelessly with me as a team — **we both love helping you learn** — to give you the best guidance we can!

Yes! I can use what you write that you found helpful to **ask Columbia to let me give you more** of what helped you in your future classes.

**user and job stories**

## user and job stories, helps you to *be specific* on structuring communications

As a [person in a particular role]

I want to [perform an action or find something out]

So that [I can achieve my goal of ...]

When [there's a particular situation]

I want to [perform an action or find something out]

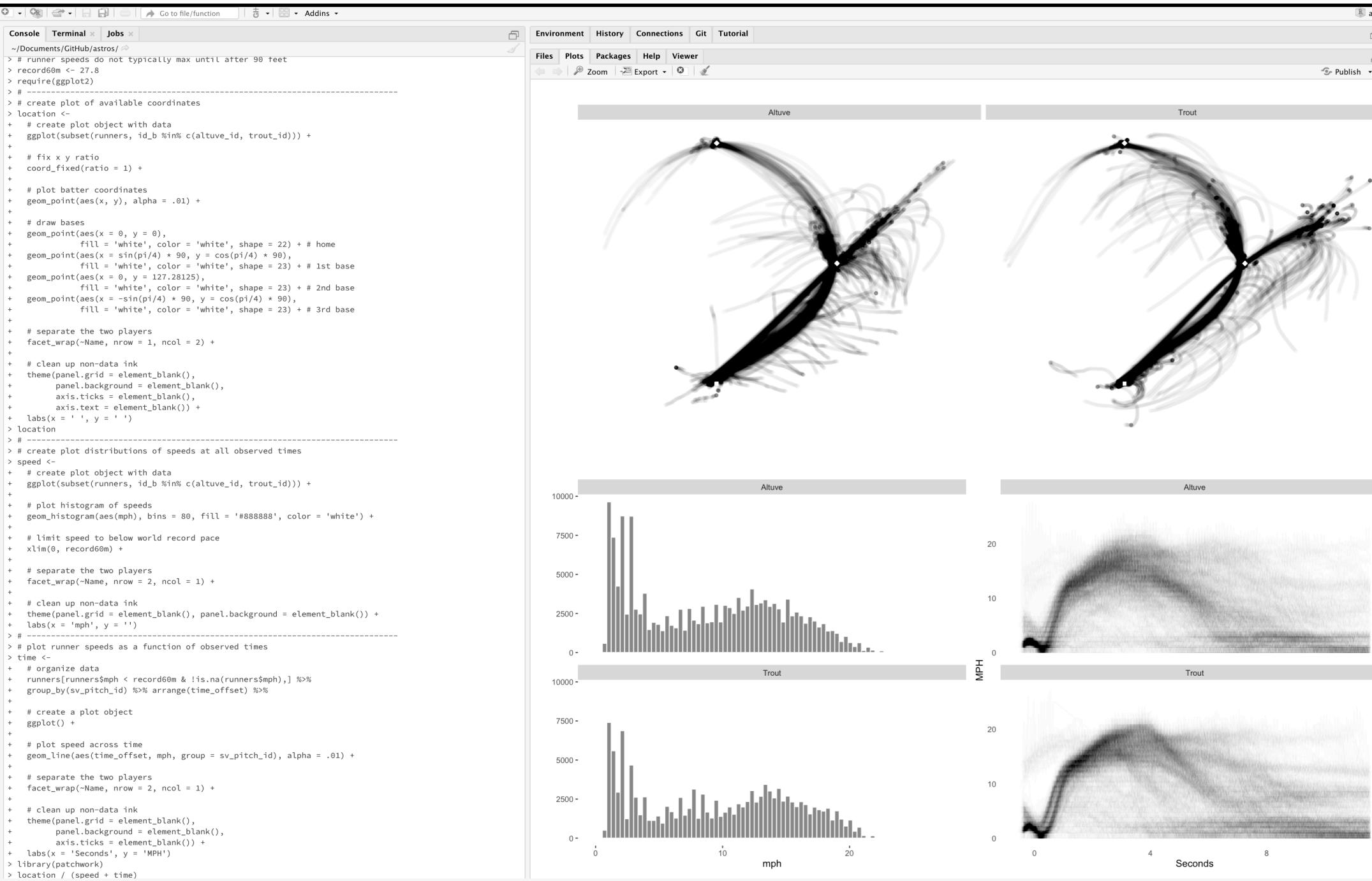
So I can [achieve my goal of ...]

**prototyping**

**prototyping, benefits of prototyping — the best ideas come from the most ideas**

**Mike Bostock : “*design is a search problem*”**

# prototyping, benefits of *code prototyping* — depend on creator's *proficiency* and *speed* in coding



# prototyping, benefits of sketching



**Nadieh Bremer's sketch tools**

**Pen & Paper :** Just about as simple as it gets. There's **little that beats getting your ideas out in the open than plain pen and paper.** We often sketch out our initial thoughts on paper (or the "digital" paper of our tablets). Nadieh basically always has a small pocket notebook and pen within her reach, even when outside, so she can start a brainstorming session wherever she might be. Shirley used a sketchbook until she got an iPad Pro mid-way through Data Sketches.

— Bremer & Wu, 2021

# prototyping, benefits of sketching

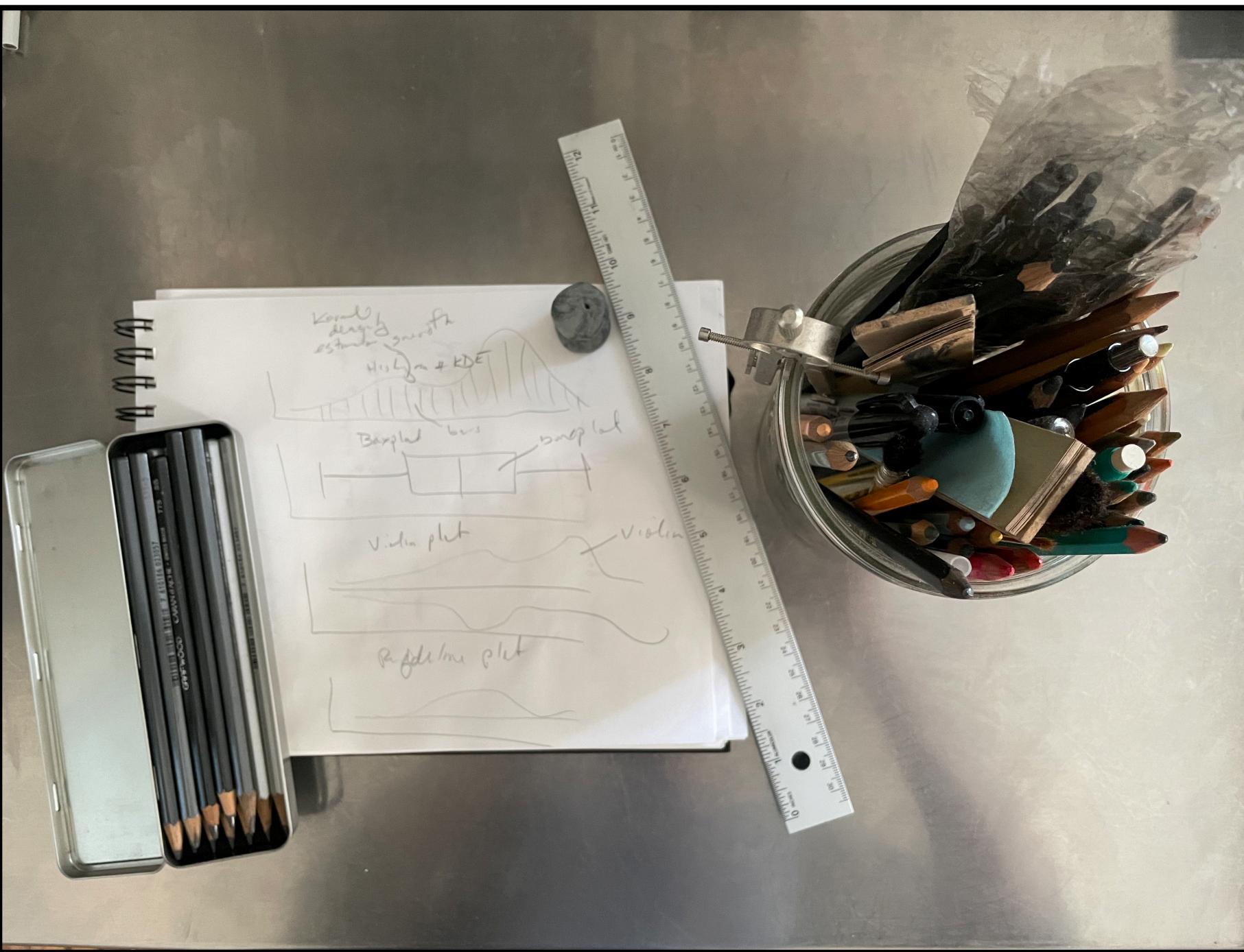
**iPad & Apple Pencil** : A stand-in for the conventional “paper and pen,” the introduction of high precision tablets, drawing tools, and apps makes it easy to take a “sketch” to the next level. We can undo an action, easily switch between colors and pen types and work with multiple layers, while still having the **ease of drawing with our hands** (as opposed to code).

— Bremer & Wu, 2021

Shirley Wu's sketch tools



# prototyping, benefits of sketching



Yep, me too.

**pair-wise prototyping your  
interactive communications**

## pair-wise prototyping, first *audience-purpose-affordances*, then *divergent sketching*

A **shares interactive** communication with B. A does **not** describe or explain.



B **thinks out loud**, answering: whether and how the communication reveals its audience, purpose, and interactive affordances for exploring.

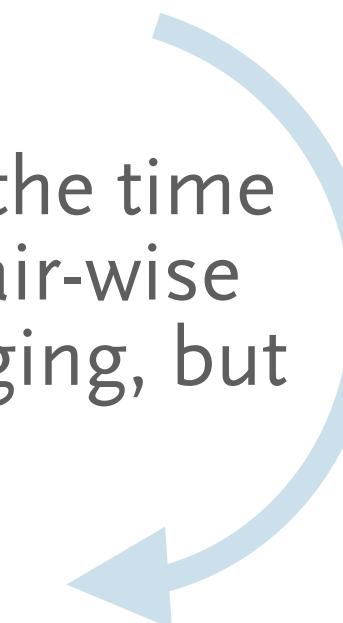


A **listens** and takes notes: this is an opportunity to learn outside perspective on the communication.

**pen & paper** : A and B together start **sketching divergent ideas** of alternative structures to show and explore in the data.



**Then switch.** Use half the time for each interactive. Pair-wise prototyping is challenging, but hopefully fun.



**The reward.** The pair with the most divergent sketches wins ... the most divergent sketches.

**resources**

# References

- Spencer**, Scott. Sec. 4.2 In *Data in Wonderland*. 2021. [https://ssp3nc3r.github.io/  
data\\_in\\_wonderland](https://ssp3nc3r.github.io/data_in_wonderland).
- 
- Bayles**, David, and Ted Orland. *Art & Fear. Observations on the Perils (and Rewards) of Artmaking*. The Image Continuum, 1993.
- Bostock**, Michael. “Design Is a Search Problem.” Presented at the *OpenViz Conference*, Boston, MA, 2014. <http://www.openvisconf.com/2014/>.
- Bremer**, Nadieh, and Shirley Wu. *Data Sketches A Journey of Imagination, Exploration, and Beautiful Data Visualizations*. Milton, UNITED KINGDOM: A K Peters/CRC Press, 2021.
- Lupi**, Giorgia. “Beautiful Reasons. Towards New Aesthetics for Data Narratives.” Medium. *Accurat In Sight* (blog), January 20, 2016. [https://medium.com/accurat-in-sight/  
beautiful-reasons-c1c6926ab7d7](https://medium.com/accurat-in-sight/beautiful-reasons-c1c6926ab7d7).

**Lupi**, Giorgia. “Learning to See: Visual Inspirations and Data Visualization.” Medium. *Accurat In Sight* (blog), January 27, 2016. [https://medium.com/accurat-in-sight/learning-  
to-see-visual-inspirations-and-data-visualization-ce9107349a](https://medium.com/accurat-in-sight/learning-to-see-visual-inspirations-and-data-visualization-ce9107349a).

———. “Sketching with Data Opens the Mind’s Eye.” Medium. *Accurat In Sight* (blog), February 10, 2016. [https://medium.com/accurat-in-sight/sketching-with-data-opens-  
the-mind-s-eye-92d78554565](https://medium.com/accurat-in-sight/sketching-with-data-opens-the-mind-s-eye-92d78554565). **Hartson**, H. Rex, and Pardha S. Pyla. *The UX Book: Agile UX Design for a Quality User Experience*. Second edition. Cambridge, MA: Morgan Kaufmann, 2019.

**Ko**, Amy J. “Design Methods: What Design Is and How to Do It.” Book. <https://faculty.washington.edu/ajko/books/design-methods/>, September 2020.

**Richards**, Sarah. *Content Design*. Content Design London., 2017.