



PSYCH 201B

Statistical Intuitions for Social Scientists

Welcome!

01/06/2026

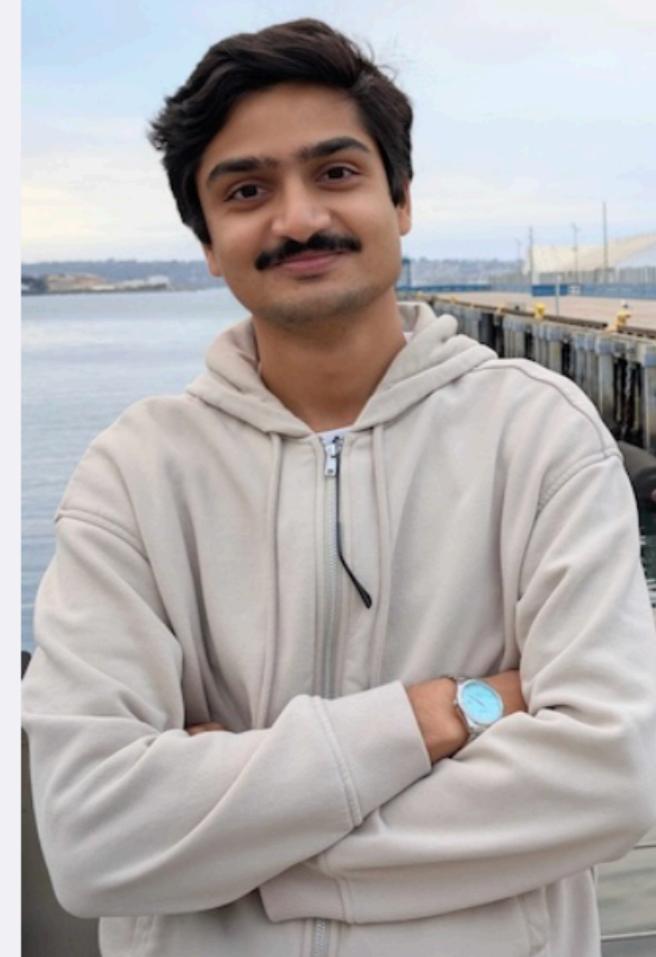
<https://stat-intuitions.com/>

Today's Plan

- Instructor intros (~15m)
- Introduce yourselves! (~15m)
- Course overview & QA (~30m)

Meet your Instructors!

2025 Instructional Team

	<u>Eshin Jolly</u>	<u>Khuyen Le</u>	<u>Ajinkya Jadhav</u>
	 A portrait of a young man with dark hair and a well-groomed beard, smiling at the camera.	 A portrait of a young woman with long dark hair and glasses, smiling at the camera. She is wearing a denim jacket over a white shirt.	 A portrait of a young man with dark hair and a mustache, smiling at the camera. He is wearing a light-colored hoodie.
Role	Instructor	Teaching Assistant	Teaching Assistant
Email	e3jolly@ucsd.edu	khuyenle@ucsd.edu	asjadhav@ucsd.edu
Office	Mandler 3509	TBD	TBD
Office Hours	Wednesdays 4-5pm or by appt	Thursdays 1-2pm	Tuesdays 1-2pm

Ajinkya Jadhav



Teaching Assistant

asjadhav@ucsd.edu

TBD

Tuesdays 1-2pm

Background: I'm a 1st year grad student in the Mechanical Engineering Dept.

Interests: Hiking, road trips, exploring new places

Fun fact: I like going to the beach every Friday

Website: <https://github.com/jajinkya211>

Khuyen Le



Teaching Assistant

khuyenle@ucsd.edu

TBD

Thursdays 1-2pm

Background: I'm a 3rd year PhD student in Psychology. I work on children's acquisition of language and conceptual categories

Interests: Skating, video-games, animals

Fun fact: I'm a big Sherlock Holmes fan!

Website: <https://khuyen-le.github.io/>

Eshin Jolly



Instructor

e3jolly@ucsd.edu

Mandler 3509

Wednesdays 4-5pm or by appt

Background:

Computational Social Neuroscience
PhD & Post-doc @ Dartmouth College
“Naturalistic” experimental designs
fMRI + multi-player online experiments

Interests: Playing/seeing music,
sunlight, food

Fun fact: My cat jumped off my 5th floor patio 2mo ago, but survived due to her righting reflex and orthopedic surgery

Website: eshinjolly.com



Introduce yourselves!

Name, background, interests, fun facts

What did you do during the winter break?

What are you hoping to get out of this class?

Course Overview

master the tools that empower
you to do your **research**



develop **statistical thinking**

“Statistical thinking will one day be
as necessary for efficient citizenship
as the ability to read and write.”

~ Samuel S. Wilks, 1951
of χ^2 and the log-likelihood ratio!

By the end of the term I want you to feel
empowered and **formidable** in your
Python, analytic, and statistical skills!

Topics we'll cover

- Describing and summarizing continuous and discrete data
- The essence of linear algebra (vectors, matrices, embeddings, distances, etc)
- The general-linear-model (GLM), estimation, comparison
- Extensions of GLM and design-matrices (ANOVA)
- Regularized models and decomposition (ridge, PCA)
- Multi-level models (LMMs, rfx)
- Resampling statistics (bootstrap, permutation)
- Uncertainty, inference, prediction, generalization, basic ML

Tools we'll use

- Python and the Scientific Python Ecosystem
 - Very beginner friendly; “executable pseudo-code”
 - Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, Pymer4
- Jupyter Notebooks
 - Mix of prose (markdown), code (Python), and outputs (figures, data-frames)
 - Like RMarkdown/quarto!
- JupyterLab
 - Remote cloud option setup by UCSD Datahub
 - Easiest to start, almost no setup, but least configurable
- Visual Studio Code
 - Local option for running everything on your laptop
 - General purpose code-editor with support for notebooks
 - Fully customizable, but more setup required

Class Resources

- Course website: stat-intuitions.com
 - syllabus, schedule, readings, slides, notebooks, resources
 - **check this when in doubt!**
- Slack: psyc201b.slack.com
 - **all correspondence**
- Github Org: github.com/psyc201b
 - **submit assignments**
 - can also download the entire course website!
- PollEverywhere: pollev.com/201b
 - **for anonymous live polls in class**

How will we learn?

How will we learn?

- Lectures/discussions
- Labs
- Weekly problem-sets (solo or group)
- Midterm (solo)
- Final project (TBD; multiple options)

How will we learn?

- **Lectures**
 - Monday & Wednesday, **2:00-3:50pm**
 - Combination of slides, readings + discussion, interactive jupyter notebooks

How will we learn?

- **Labs**
 - Tuesdays, **5:00-6:50pm**
 - Work through code together
 - Ask your instructors questions
 - Help each other out
 - Python tutorials in first 2 weeks

How will we learn?

- **Problem sets (HW)**
 - ~1 assignment per week (~10 total)
 - Work solo or in groups (groups encouraged!)
 - each group member should **write & submit their own jupyter notebook**
 - include names of all group members
 - Will be made **available after Wed class** and due the **following Tues** (before next lab)
 - **Cooperative extra-credit opportunity (up to 10%)**
 - If you/your peers think you went “above-and-beyond”
 - Nominate and justify in your notebook

How will we learn?

- **Midterm exam**
 - like weekly problem sets, BUT:
 - you have to work on it **on your own**
 - tentative dates: available on **Tues (2/11)** and due on **Fri (2/14) at midnight**
 - we meet only once during mid-term week so you have more time!

How will we learn?

- **Final project**
 - You have multiple options that you can choose from and plan with instructors
 - A novel analysis of your own/your lab's data
 - A novel analysis of a publicly available open dataset
 - Paired problem-set generation - where you and another student will generate and score each other's problems

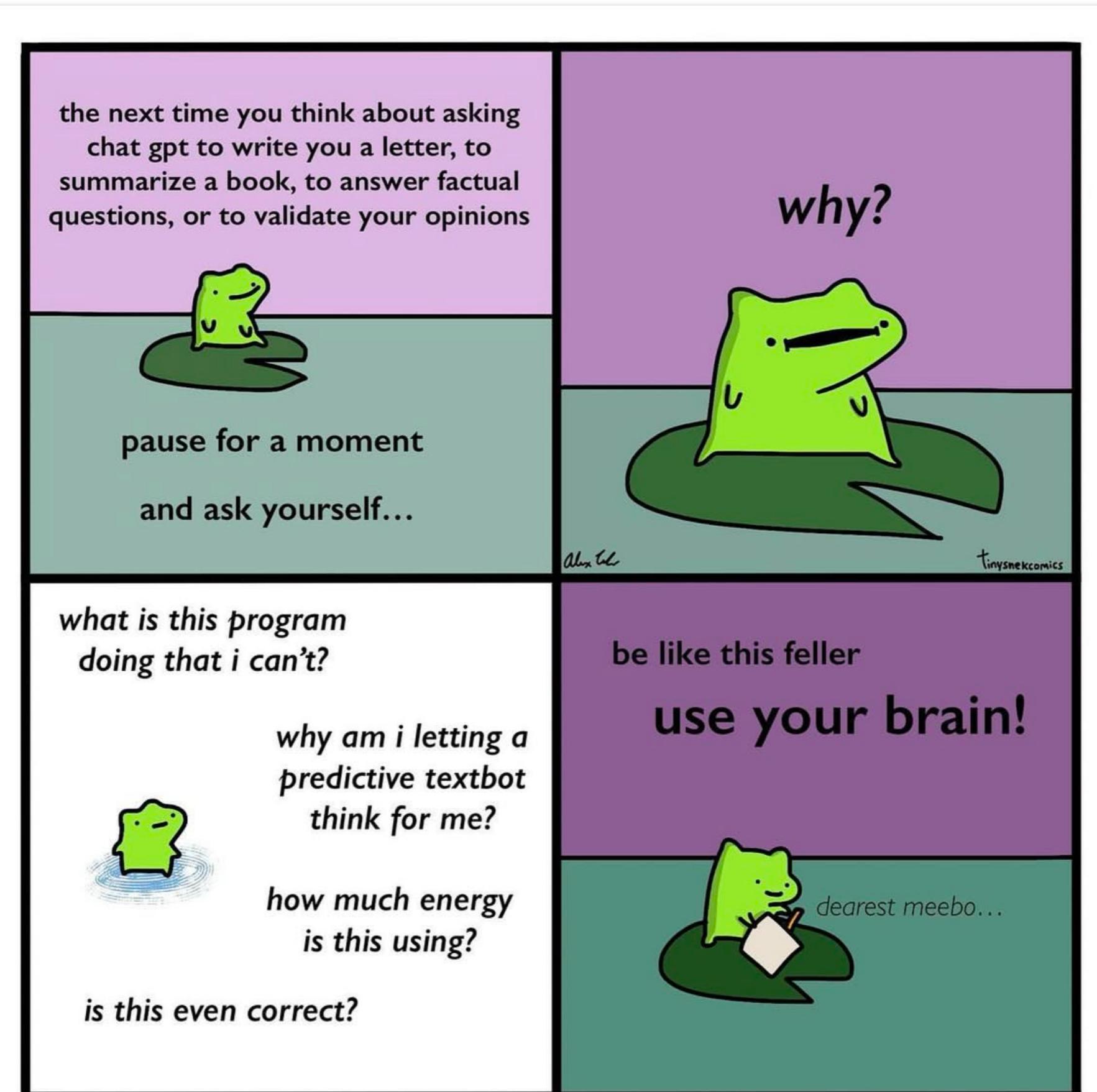
How will we learn?

- Lectures/discussions
 - **Do readings before class & participate in discussions**
- Labs
 - **Participate in lab sections and submit notebooks**
- HW (solo or group)
 - **Submit weekly jupyter notebook**
- Midterm
 - **Just like HW but you have to do solo**
- Final project
 - **Choose from options with Instructors**

Grading

- Lectures/discussions (15%)
 - **Do readings before class & participate in discussions**
- Labs (15%)
 - **Participate in lab sections and submit notebooks**
- HW (20% + up-to 10% extra-credit)
 - **Submit weekly jupyter notebook**
- Midterm (20%)
 - **Just like HW but you have to do solo**
- Final project (30%)
 - **Choose from options with Instructors**

Generative AI Policy



Feedback

- Your feedback is **incredibly important to us**
 - Will setup anonymous feedback URL
- This is a **brand-new** course
 - We sincerely appreciate your **patience!**
- We **may not cover all topics** you're interested in
 - But you'll be setup to pursue further **self-study!**
 - Eshin can **direct you towards additional resources** if desired
- We're a **small-group** so we can be **dynamic** and **adjust scheduling** as needed to provide the best learning environment for you!

Questions?

For next time:

1. Background survey (5-10m)
 - <https://tinyurl.com/201b-background-survey>
 - **due tomorrow Jan 7th**
2. Sign up for class slack
 - <https://tinyurl.com/201b-join-slack>

Thanks!

see you on **Tomorrow @5pm**
make sure to bring your laptop!