Student Presentations

About

This page documents the process of importing, cleaning, and visualizing the data about student presentation preferences. The page then goes on to show how student presenters and discussants were assigned to readings by date and student preference.

Set up

We load some critical packages.

```
suppressPackageStartupMessages(library(ggplot2))
suppressPackageStartupMessages(library(dplyr))
suppressPackageStartupMessages(library(tidyr))
suppressPackageStartupMessages(library(googlesheets4))
```

Acquire

We acquire the survey data from a Google sheet generated by the survey form, then save it as as CSV.

```
if (params$reimport) {
   if (!dir.exists(params$csv_dir)) {
      message("Creating missing `include/csv/`.")
      dir.create(params$csv_dir)
   }

   options(gargle_oauth_email = Sys.getenv("GMAIL_SURVEY"))
   googledrive::drive_auth()

   student_ratings <- read_sheet(
      "https://docs.google.com/spreadsheets/d/17kvNbyOj1SYjyasxgpo6vDZce1sL4lwqqeAbRCWJJEE/edir
) |>
      readr::write_csv(file.path(params$csv_dir, params$data_csv_fn))
}
```

Clean

We reimport the saved CSV file and clean it.

- [1] "Timestamp"
- [2] "Email Address"
- [3] "A: How robust is the evidence for Piaget's trajectories?"
- [4] "B: When does object permanence emerge?"
- [5] "C. How does changing the task inform on the underlying construct(s) about physical known
- [6] "D: Rich interpretation of group differences in infant looking-time paradigms: How rich
- [7] "E: How do developmental disorders inform our understanding of cognitive development?"
- [8] "F: The risks of generalization"
- [9] "G: A connectionist model to explain why infants seem so smart"
- [10] "H: Emergentism and variants of the A-not-B task"
- [11] "I: Does development gate input to prevent a \"blooming, buzzing confusion?\""
- [12] "J: How AI & robotics inform developmental science?"
- [13] "K: Imitation in cultural learning"
- [14] "L: Gesture"
- [15] "M: Learning from testimony"
- [16] "N: Naive psychology"
- [17] "O: Poverty is bad for cognition"
- [18] "P: Poverty can be adaptive for cognition"

We want to capture the "raw" or full question name and the short variable name in a data dictionary.

Visualize

Let's look at ratings by topic to see if we have reasonable variation.

To do this, we need to incorporate the rating_* columns as row variables.

```
ratings_long <- ratings_clean |>
  tidyr::pivot_longer(cols = c(3:18), names_to = "topic", values_to = "rating")
```

Table 1: A minimal data dictionary.

```
ratings_qs <- names(ratings)</pre>
ratings_clean <- ratings |>
  dplyr::rename(
    timestamp = "Timestamp",
    email = "Email Address",
    piaget_traj = "A: How robust is the evidence for Piaget's trajectories?",
    obj_perm = "B: When does object permanence emerge?",
    core_knowl = "C. How does changing the task inform on the underlying construct(s) about
    rich_interp = "D: Rich interpretation of group differences in infant looking-time paradi
    dev_disorders = "E: How do developmental disorders inform our understanding of cognitive
    generalization = "F: The risks of generalization",
    connectionism = "G: A connectionist model to explain why infants seem so smart",
    a_not_b = "H: Emergentism and variants of the A-not-B task",
    gate_input = "I: Does development gate input to prevent a \"blooming, buzzing confusion?'
    ai robotics = "J: How AI & robotics inform developmental science?",
    imitation = "K: Imitation in cultural learning",
    gesture = "L: Gesture",
    testimony = "M: Learning from testimony",
    naive_psy = "N: Naive psychology",
    poverty_bad = "O: Poverty is bad for cognition",
    poverty_adaptive = "P: Poverty can be adaptive for cognition"
student_info <- readr::read_csv(file.path(params$csv_dir, "student_data.csv"),</pre>
                                  show_col_types = FALSE)
# Add a student index variable
ratings_clean <- ratings_clean |>
  mutate(student_i = 1:length(timestamp))
ratings_clean <- left_join(ratings_clean, student_info, by = 'email')
ratings_short <- names(ratings_clean)</pre>
# ratings_dd <- data.frame(qs = ratings_qs,</pre>
                                  qs_short = ratings_short
#
# ratings_dd |>
   knitr::kable(format = 'html')
# readr::write_csv(ratings_dd,
                   file = file.path(params$csv_dir,
#
                                     "ratings-data-dict.csv"))
```

```
ratings_long |>
  ggplot() +
  aes(x = rating) +
  geom_histogram() +
  facet_wrap(~ topic, nrow = 6, ncol = 3)
```

`stat_bin()` using `bins = 30`. Pick better value with `binwidth`.

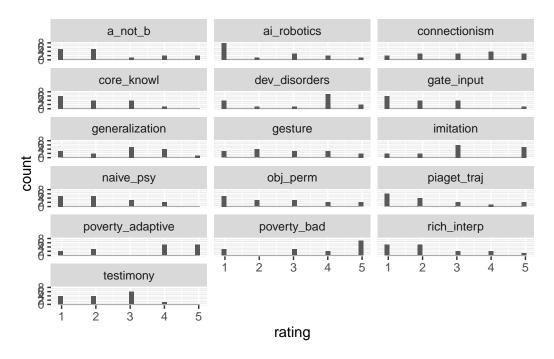
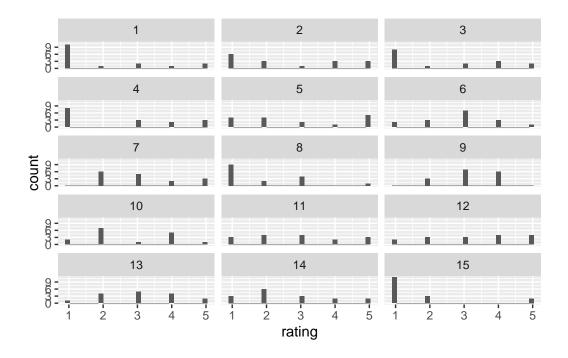


Figure 1

Let's also look to see if we have some variation by student. We assign an anonymous code to each student first.

```
ratings_long |>
  ggplot() +
  aes(x = rating) +
  geom_histogram() +
  facet_wrap(~ student_i, nrow = 6, ncol = 3)
```

`stat_bin()` using `bins = 30`. Pick better value with `binwidth`.



Assign

Let's work in order of the presentations, by date

2025-09-12

```
ratings_long |>
  filter(topic == "piaget_traj", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:19:19	ars7656@psu.edu	2	Alyssa Swift	piaget_traj	5
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	$piaget_traj$	4
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	$piaget_traj$	3
2025-08-29 14:03:01	$\rm jzh6650@psu.edu$	12	Jinyi He	$piaget_traj$	5
2025-08-30 07:49:21	${\it zps5262}$ @psu.edu	13	Suzy Su	$piaget_traj$	3

```
ratings_long |>
  filter(topic == "obj_perm", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	$student_i$	name	topic	rating
2025-08-26 16:19:19	ars7656@psu.edu	2	Alyssa Swift	obj_perm	5
2025-08-27 16:09:30	${ m opb5142@psu.edu}$	4	Olivia Bell	obj_perm	3
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	obj_perm	5
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	obj_perm	3
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	obj_perm	4
2025-08-29 14:03:01	$\rm jzh6650@psu.edu$	12	Jinyi He	obj_perm	3
2025-08-30 07:49:21	${ m zps}5262@{ m psu.edu}$	13	Suzy Su	obj_perm	4

```
presenters <- data.frame(email = NA, date = NA, topic = NA, present_discuss = NA)
presenters[1, 'email'] <- "ars7656@psu.edu"</pre>
presenters[1, 'date'] <- "2025-09-12"</pre>
presenters[1, 'topic'] <- "piaget_traj"</pre>
presenters[1, 'present_discuss'] <- "present"</pre>
presenters[2, 'email'] <- "jzh6650@psu.edu"</pre>
presenters[2, 'date'] <- "2025-09-12"</pre>
presenters[2, 'topic'] <- "piaget_traj"</pre>
presenters[2, 'present_discuss'] <- "discuss"</pre>
presenters[3, 'email'] <- "mml5964@psu.edu"</pre>
presenters[3, 'date'] <- "2025-09-12"</pre>
presenters[3, 'topic'] <- "obj_perm"</pre>
presenters[3, 'present_discuss'] <- "present"</pre>
presenters[4, 'email'] <- "gks5496@psu.edu"</pre>
presenters[4, 'date'] <- "2025-09-12"</pre>
presenters[4, 'topic'] <- "obj_perm"</pre>
presenters[4, 'present discuss'] <- "discuss"</pre>
presenters
```

```
email date topic present_discuss
1 ars7656@psu.edu 2025-09-12 piaget_traj present
2 jzh6650@psu.edu 2025-09-12 piaget_traj discuss
3 mml5964@psu.edu 2025-09-12 obj_perm present
4 gks5496@psu.edu 2025-09-12 obj_perm discuss
```

2025-09-26

```
ratings_long |>
  filter(topic == "core_knowl", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	core_knowl	3
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	$core_knowl$	3
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	$core_knowl$	4
2025-08-30 07:49:21	${ m zps}5262@{ m psu.edu}$	13	Suzy Su	$core_knowl$	3
2025-08-30 11:26:33	${\rm ckl} 5780 @ {\rm psu.edu}$	14	Caesar Liu	$core_knowl$	3

```
ratings_long |>
  filter(topic == "rich_interp", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:19:19	ars7656@psu.edu	2	Alyssa Swift	rich_interp	4
2025-08-27 16:09:30	opb5142@psu.edu	4	Olivia Bell	$rich_interp$	3
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	$rich_interp$	5
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	$rich_interp$	3
2025-08-30 07:49:21	${\it zps5262@psu.edu}$	13	Suzy Su	$rich_interp$	4

```
presenters[5, 'email'] <- "cfa5368@psu.edu"
presenters[5, 'date'] <- "2025-09-26"
presenters[5, 'topic'] <- "core_knowl"
presenters[5, 'present_discuss'] <- "present"
presenters[6, 'email'] <- "yqk5318@psu.edu"
presenters[6, 'date'] <- "2025-09-26"
presenters[6, 'topic'] <- "core_knowl"
presenters[6, 'present_discuss'] <- "discuss"

presenters[7, 'email'] <- "zps5262@psu.edu"
presenters[7, 'date'] <- "2025-09-26"</pre>
```

```
presenters[7, 'topic'] <- "rich_interp"
presenters[7, 'present_discuss'] <- "present"
presenters[8, 'email'] <- "mml5964@psu.edu"
presenters[8, 'date'] <- "2025-09-26"
presenters[8, 'topic'] <- "rich_interp"
presenters[8, 'present_discuss'] <- "discuss"

presenters |>
    arrange(email, date, present_discuss) |>
    knitr::kable(format = 'html')
```

email	date	topic	present_discuss
ars7656@psu.edu	2025-09-12	piaget_traj	present
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
gks5496@psu.edu	2025-09-12	obj_perm	discuss
jzh6650@psu.edu	2025-09-12	$piaget_traj$	discuss
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	$rich_interp$	discuss
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss
${\it zps5262@psu.edu}$	2025-09-26	$rich_interp$	present

2025-10-05

```
ratings_long |>
  filter(topic == "dev_disorders", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	dev_disorders	5
2025-08-27 16:09:30	opb5142@psu.edu	4	Olivia Bell	$dev_disorders$	4
2025-08-28 09:35:18	165527 psu.edu	6	Hanna Huang	$dev_disorders$	4
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	$dev_disorders$	5
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	$dev_disorders$	4
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	$dev_disorders$	4
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	$dev_disorders$	3
2025-08-29 14:03:01	jzh6650@psu.edu	12	Jinyi He	$dev_disorders$	4
2025-08-30 07:49:21	zps5262@psu.edu	13	Suzy Su	dev disorders	4

timestamp	email	student_i	name	topic	rating
2025-08-30 11:26:33	${\rm ckl}5780{\rm @psu.edu}$	14	Caesar Liu	$dev_disorders$	4

```
ratings_long |>
  filter(topic == "generalization", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	$student_i$	name	topic	rating
2025-08-27 16:09:30	opb5142@psu.edu	4	Olivia Bell	generalization	4
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	generalization	3
2025-08-28 09:35:18	16h5527 $psu.edu$	6	Hanna Huang	generalization	3
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	generalization	3
2025-08-29 02:12:03	eoa5294@psu.edu	8	Elizabeth Aleru	generalization	3
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	generalization	4
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	generalization	4
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	generalization	5
2025-08-29 14:03:01	jzh6650@psu.edu	12	Jinyi He	generalization	4
2025-08-30 07:49:21	${\it zps5262}$ @psu.edu	13	Suzy Su	generalization	3

Let's see who does not yet have an assignment.

```
presenters_assigned <- presenters$email |>
    unique()
all_students <- ratings_long$email |>
    unique()

not_assigned <- !(all_students %in% presenters_assigned)
all_students[not_assigned]</pre>
```

- [1] "nsb5522@psu.edu" "kab7845@psu.edu" "opb5142@psu.edu" "lfh5527@psu.edu"
- [5] "pxs5614@psu.edu" "eoa5294@psu.edu" "lxd5406@psu.edu" "ckl5780@psu.edu"

```
presenters[9, 'email'] <- "kab7845@psu.edu"
presenters[9, 'date'] <- "2025-10-05"
presenters[9, 'topic'] <- "dev_disorders"
presenters[9, 'present_discuss'] <- "present"
presenters[10, 'email'] <- "pxs5614@psu.edu"</pre>
```

```
presenters[10, 'date'] <- "2025-10-05"
presenters[10, 'topic'] <- "dev_disorders"
presenters[10, 'present_discuss'] <- "discuss"

presenters[11, 'email'] <- "cfa5368@psu.edu"
presenters[11, 'date'] <- "2025-10-05"
presenters[11, 'topic'] <- "generalization"
presenters[11, 'present_discuss'] <- "discuss"
presenters[12, 'email'] <- "opb5142@psu.edu"
presenters[12, 'date'] <- "2025-10-05"
presenters[12, 'topic'] <- "generalization"
presenters[12, 'topic'] <- "generalization"
presenters[12, 'present_discuss'] <- "present"

presenters |>
    arrange(email, date, present_discuss) |>
    knitr::kable(format = 'html')
```

email	date	topic	present_discuss
ars7656@psu.edu	2025-09-12	piaget_traj	present
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025 - 10 - 05	generalization	discuss
gks5496@psu.edu	2025-09-12	obj_perm	discuss
jzh6650@psu.edu	2025-09-12	piaget_traj	discuss
kab7845@psu.edu	2025-10-05	dev_disorders	present
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	rich_interp	discuss
opb5142@psu.edu	2025-10-05	generalization	present
pxs5614@psu.edu	2025-10-05	dev_disorders	discuss
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss
zps5262@psu.edu	2025-09-26	$rich_interp$	present

2025-10-24

```
presenters_assigned <- presenters$email |>
  unique()
all_students <- ratings_long$email |>
  unique()
```

```
not_assigned <- !(all_students %in% presenters_assigned)
all_students[not_assigned]</pre>
```

- [1] "nsb5522@psu.edu" "lfh5527@psu.edu" "eoa5294@psu.edu" "lxd5406@psu.edu"
- [5] "ck15780@psu.edu"

```
ratings_long |>
  filter(topic == "connectionism", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:11:24	nsb5522@psu.edu	1	Natalie Byrd	connectionism	3
2025-08-26 16:19:19	ars7656@psu.edu	2	Alyssa Swift	connection is m	4
2025-08-27 16:09:30	opb5142@psu.edu	4	Olivia Bell	connection is m	5
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	connectionism	5
2025-08-28 09:35:18	lfh5527@psu.edu	6	Hanna Huang	connection is m	3
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	connectionism	4
2025-08-29 02:12:03	eoa5294@psu.edu	8	Elizabeth Aleru	connectionism	3
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	connection is m	5
2025-08-30 07:49:21	zps5262@psu.edu	13	Suzy Su	connection is m	4
2025-08-30 11:26:33	ckl5780@psu.edu	14	Caesar Liu	connection is m	4

```
ratings_long |>
  filter(topic == "a_not_b", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:11:24	nsb5522@psu.edu	1	Natalie Byrd	a_not_b	4
2025-08-26 16:19:19	${ m ars}7656@{ m psu.edu}$	2	Alyssa Swift	a_not_b	5
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	a_not_b	3
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	a_not_b	4
2025-08-30 07:49:21	${ m zps}5262@{ m psu.edu}$	13	Suzy Su	a_not_b	5

```
presenters[13, 'email'] <- "gks5496@psu.edu"</pre>
presenters[13, 'date'] <- "2025-10-24"</pre>
presenters[13, 'topic'] <- "connectionism"</pre>
presenters[13, 'present_discuss'] <- "present"</pre>
presenters[14, 'email'] <- "ckl5780@psu.edu"</pre>
presenters[14, 'date'] <- "2025-10-24"</pre>
presenters[14, 'topic'] <- "connectionism"</pre>
presenters[14, 'present_discuss'] <- "discuss"</pre>
presenters[15, 'email'] <- "nsb5522@psu.edu"</pre>
presenters[15, 'date'] <- "2025-10-24"</pre>
presenters[15, 'topic'] <- "a_not_b"</pre>
presenters[15, 'present_discuss'] <- "present"</pre>
presenters[16, 'email'] <- "zps5262@psu.edu"</pre>
presenters[16, 'date'] <- "2025-10-24"</pre>
presenters[16, 'topic'] <- "a_not_b"</pre>
presenters[16, 'present_discuss'] <- "discuss"</pre>
presenters |>
  arrange(email, date, present_discuss) |>
  knitr::kable(format = 'html')
```

email	date	topic	present_discuss
ars7656@psu.edu	2025-09-12	piaget_traj	present
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025 - 10 - 05	generalization	discuss
${\rm ckl}5780{\rm @psu.edu}$	2025-10-24	connectionism	discuss
gks5496@psu.edu	2025-09-12	obj_perm	discuss
gks5496@psu.edu	2025-10-24	connectionism	present
jzh6650@psu.edu	2025-09-12	piaget_traj	discuss
kab7845@psu.edu	2025-10-05	$dev_disorders$	present
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	$rich_interp$	discuss
nsb5522@psu.edu	2025-10-24	a_not_b	present
${\rm opb5142@psu.edu}$	2025-10-05	generalization	present
pxs5614@psu.edu	2025-10-05	$dev_disorders$	discuss
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss
${\it zps5262@psu.edu}$	2025-09-26	$rich_interp$	present
${\it zps5262@psu.edu}$	2025-10-24	a_not_b	discuss

2025-10-31

```
presenters_assigned <- presenters$email |>
    unique()
all_students <- ratings_long$email |>
    unique()

not_assigned <- !(all_students %in% presenters_assigned)
all_students[not_assigned]</pre>
```

[1] "lfh5527@psu.edu" "eoa5294@psu.edu" "lxd5406@psu.edu"

```
ratings_long |>
  filter(topic == "gate_input", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:19:19	ars7656@psu.edu	2	Alyssa Swift	gate_input	3
2025-08-28 09:35:18	165527 psu.edu	6	Hanna Huang	$gate_input$	3
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	$gate_input$	3
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	$gate_input$	3
2025-08-30 07:49:21	${\it zps5262}$ @psu.edu	13	Suzy Su	gate_input	5

```
ratings_long |>
  filter(topic == "ai_robotics", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	$student_i$	name	topic	rating
2025-08-28 09:35:18	lfh5527@psu.edu	6	Hanna Huang	ai_robotics	4
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	ai_robotics	5
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	ai_robotics	3
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	ai_robotics	3
2025-08-29 14:03:01	$\rm jzh6650@psu.edu$	12	Jinyi He	ai_robotics	4
2025-08-30 11:26:33	ckl5780@psu.edu	14	Caesar Liu	ai_robotics	3

```
presenters[17, 'email'] <- "lxd5406@psu.edu"</pre>
presenters[17, 'date'] <- "2025-10-31"</pre>
presenters[17, 'topic'] <- "gate_input"</pre>
presenters[17, 'present_discuss'] <- "present"</pre>
presenters[18, 'email'] <- "ars7656@psu.edu"</pre>
presenters[18, 'date'] <- "2025-10-31"</pre>
presenters[18, 'topic'] <- "gate_input"</pre>
presenters[18, 'present_discuss'] <- "discuss"</pre>
presenters[19, 'email'] <- "pxs5614@psu.edu"</pre>
presenters[19, 'date'] <- "2025-10-31"</pre>
presenters[19, 'topic'] <- "ai_robotics"</pre>
presenters[19, 'present_discuss'] <- "present"</pre>
presenters[20, 'email'] <- "lfh5527@psu.edu"</pre>
presenters[20, 'date'] <- "2025-10-31"</pre>
presenters[20, 'topic'] <- "ai_robotics"</pre>
presenters[20, 'present_discuss'] <- "discuss"</pre>
presenters |>
  arrange(email, date, present_discuss) |>
  knitr::kable(format = 'html')
```

email	date	topic	present_discuss
ars7656@psu.edu	2025-09-12	piaget_traj	present
${\rm ars}7656@{\rm psu.edu}$	2025 - 10 - 31	$gate_input$	discuss
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025-10-05	generalization	discuss
ckl5780@psu.edu	2025 - 10 - 24	connectionism	discuss
gks5496@psu.edu	2025-09-12	obj_perm	discuss
gks5496@psu.edu	2025 - 10 - 24	connectionism	present
jzh6650@psu.edu	2025-09-12	piaget_traj	discuss
kab7845@psu.edu	2025-10-05	$dev_disorders$	present
lfh5527@psu.edu	2025-10-31	ai_robotics	discuss
1xd5406 psu.edu	2025-10-31	$gate_input$	present
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	$rich_interp$	discuss
nsb5522@psu.edu	2025 - 10 - 24	a_not_b	present
opb5142@psu.edu	2025-10-05	generalization	present
pxs5614@psu.edu	2025-10-05	$dev_disorders$	discuss
pxs5614@psu.edu	2025-10-31	ai_robotics	present
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss

email	date	topic	present_discuss
zps5262@psu.edu	2025-09-26	rich_interp	present
zps5262@psu.edu	2025-10-24	a_not_b	discuss

2025-11-14

```
presenters_assigned <- presenters$email |>
   unique()
all_students <- ratings_long$email |>
   unique()

not_assigned <- !(all_students %in% presenters_assigned)
all_students[not_assigned]</pre>
```

[1] "eoa5294@psu.edu"

```
ratings_long |>
  filter(topic == "imitation", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:11:24	nsb5522@psu.edu	1	Natalie Byrd	imitation	3
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	imitation	3
2025-08-27 16:09:30	${\rm opb5142@psu.edu}$	4	Olivia Bell	imitation	3
2025-08-28 09:35:18	lfh5527@psu.edu	6	Hanna Huang	imitation	5
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	imitation	5
2025-08-29 02:12:03	eoa5294@psu.edu	8	Elizabeth Aleru	imitation	5
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	imitation	3
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	imitation	3
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	imitation	5
2025-08-29 14:03:01	jzh6650@psu.edu	12	Jinyi He	imitation	5
2025-08-30 07:49:21	${\it zps5262@psu.edu}$	13	Suzy Su	imitation	3

```
ratings_long |>
  filter(topic == "gesture", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:19:19	ars7656@psu.edu	2	Alyssa Swift	gesture	4
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	gesture	5
2025-08-28 09:35:18	lfh5527@psu.edu	6	Hanna Huang	gesture	3
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	gesture	4
2025-08-29 02:12:03	eoa5294@psu.edu	8	Elizabeth Aleru	gesture	3
2025-08-29 09:22:04	lxd5406@psu.edu	9	Luke Debec	gesture	3
2025-08-29 09:23:35	gks5496@psu.edu	10	Zeynep Sülün	gesture	4
2025-08-29 14:03:01	jzh6650@psu.edu	12	Jinyi He	gesture	5

```
presenters[21, 'email'] <- "lfh5527@psu.edu"</pre>
presenters[21, 'date'] <- "2025-11-14"</pre>
presenters[21, 'topic'] <- "imitation"</pre>
presenters[21, 'present_discuss'] <- "present"</pre>
presenters[22, 'email'] <- "eoa5294@psu.edu"</pre>
presenters[22, 'date'] <- "2025-11-14"</pre>
presenters[22, 'topic'] <- "imitation"</pre>
presenters[22, 'present_discuss'] <- "discuss"</pre>
presenters[23, 'email'] <- "jzh6650@psu.edu"</pre>
presenters[23, 'date'] <- "2025-11-14"</pre>
presenters[23, 'topic'] <- "gesture"</pre>
presenters[23, 'present_discuss'] <- "present"</pre>
presenters[24, 'email'] <- "kab7845@psu.edu"</pre>
presenters[24, 'date'] <- "2025-11-14"</pre>
presenters[24, 'topic'] <- "gesture"</pre>
presenters[24, 'present_discuss'] <- "discuss"</pre>
presenters |>
  arrange(email, date, present_discuss) |>
  knitr::kable(format = 'html')
```

email	date	topic	present_discuss
ars7656@psu.edu	2025-09-12	piaget trai	present

email	date	topic	present_discuss
ars7656@psu.edu	2025-10-31	gate_input	discuss
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025-10-05	generalization	discuss
${\rm ckl}5780{\rm @psu.edu}$	2025-10-24	connectionism	discuss
eoa5294@psu.edu	2025-11-14	imitation	discuss
gks5496@psu.edu	2025-09-12	obj_perm	discuss
gks5496@psu.edu	2025-10-24	connectionism	present
jzh6650@psu.edu	2025-09-12	piaget_traj	discuss
jzh6650@psu.edu	2025-11-14	gesture	present
kab7845@psu.edu	2025-10-05	$dev_disorders$	present
kab7845@psu.edu	2025-11-14	gesture	discuss
16h5527 $psu.edu$	2025-10-31	ai_robotics	discuss
16h5527 $psu.edu$	2025-11-14	imitation	present
lxd5406@psu.edu	2025 - 10 - 31	$gate_input$	present
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	$rich_interp$	discuss
nsb5522@psu.edu	2025-10-24	a_not_b	present
opb5142@psu.edu	2025-10-05	generalization	present
pxs5614@psu.edu	2025-10-05	$dev_disorders$	discuss
pxs5614@psu.edu	2025-10-31	ai_robotics	present
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss
${\it zps5262@psu.edu}$	2025-09-26	$rich_interp$	present
zps5262@psu.edu	2025-10-24	a_not_b	discuss

2025-11-21

```
presenters_assigned <- presenters$email |>
    unique()
all_students <- ratings_long$email |>
    unique()

not_assigned <- !(all_students %in% presenters_assigned)
all_students[not_assigned]</pre>
```

character(0)

```
ratings_long |>
  filter(topic == "testimony", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	testimony	3
2025-08-28 09:35:18	lfh5527@psu.edu	6	Hanna Huang	testimony	3
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	testimony	3
2025-08-29 02:12:03	eoa5294@psu.edu	8	Elizabeth Aleru	testimony	3
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	testimony	4
2025-08-29 14:03:01	$\rm jzh6650@psu.edu$	12	Jinyi He	testimony	3
2025-08-30 11:26:33	${\rm ckl}5780{\rm @psu.edu}$	14	Caesar Liu	testimony	3

```
presenters[25, 'email'] <- "eoa5294@psu.edu"
presenters[25, 'date'] <- "2025-11-21"
presenters[25, 'topic'] <- "testimony"
presenters[25, 'present_discuss'] <- "present"
presenters[26, 'email'] <- "lxd5406@psu.edu"
presenters[26, 'date'] <- "2025-11-21"
presenters[26, 'topic'] <- "testimony"
presenters[26, 'present_discuss'] <- "discuss"

presenters |>
    arrange(email, date, present_discuss) |>
    knitr::kable(format = 'html')
```

email	date	topic	present_discuss
ars7656@psu.edu	2025-09-12	piaget_traj	present
${ m ars}7656@{ m psu.edu}$	2025-10-31	$gate_input$	discuss
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025-10-05	generalization	discuss
ckl5780@psu.edu	2025 - 10 - 24	connectionism	discuss
eoa5294@psu.edu	2025-11-14	imitation	discuss
eoa5294@psu.edu	2025-11-21	testimony	present
gks5496@psu.edu	2025-09-12	obj_perm	discuss
gks5496@psu.edu	2025-10-24	connectionism	present
jzh6650@psu.edu	2025-09-12	piaget_traj	discuss
jzh6650@psu.edu	2025 - 11 - 14	gesture	present

email	date	topic	present_discuss
kab7845@psu.edu	2025-10-05	dev_disorders	present
kab7845@psu.edu	2025-11-14	gesture	discuss
lfh5527@psu.edu	2025 - 10 - 31	ai_robotics	discuss
16h5527 psu.edu	2025-11-14	imitation	present
1xd5406 psu.edu	2025-10-31	$gate_input$	present
1xd5406 psu.edu	2025 - 11 - 21	testimony	discuss
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	$rich_interp$	discuss
nsb5522@psu.edu	2025-10-24	a_not_b	present
opb5142@psu.edu	2025-10-05	generalization	present
pxs5614@psu.edu	2025-10-05	$dev_disorders$	discuss
pxs5614@psu.edu	2025-10-31	ai_robotics	present
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss
${\it zps5262@psu.edu}$	2025-09-26	$rich_interp$	present
zps5262@psu.edu	2025-10-24	a_not_b	discuss

2025-12-05

```
presenters |>
  group_by(email) |>
  summarize(n_sched = n()) |>
  filter(n_sched < 2) |>
  knitr::kable(format = 'html')
```

email	n_sched
ckl5780@psu.edu	1
nsb5522@psu.edu	1
opb5142@psu.edu	1
yqk5318@psu.edu	1

```
presenters_assigned <- presenters$email |>
    unique()
all_students <- ratings_long$email |>
    unique()

not_assigned <- !(all_students %in% presenters_assigned)
all_students[not_assigned]</pre>
```

character(0)

```
ratings_long |>
  filter(topic == "naive_psy", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	naive_psy	4
2025-08-28 09:35:18	lfh5527@psu.edu	6	Hanna Huang	$naive_psy$	3
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	$naive_psy$	3
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	$naive_psy$	4
2025-08-29 14:03:01	$\rm jzh6650@psu.edu$	12	Jinyi He	$naive_psy$	3

```
presenters[27, 'email'] <- "TBD"
presenters[27, 'date'] <- "2025-12-05"
presenters[27, 'topic'] <- "naive_psy"
presenters[27, 'present_discuss'] <- "present"
presenters[28, 'email'] <- "TBD"
presenters[28, 'date'] <- "2025-12-05"
presenters[28, 'topic'] <- "naive_psy"
presenters[28, 'present_discuss'] <- "discuss"

presenters [> arrange(email, date, present_discuss) |> knitr::kable(format = 'html')
```

email	date	topic	present_discuss
TBD	2025-12-05	naive_psy	discuss
TBD	2025 - 12 - 05	naive_psy	present
${ m ars}7656@{ m psu.edu}$	2025-09-12	$piaget_traj$	present
${ m ars}7656@{ m psu.edu}$	2025-10-31	$gate_input$	discuss
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025-10-05	generalization	discuss
${\rm ckl}5780{@}{ m psu.edu}$	2025-10-24	connection is m	discuss
eoa5294@psu.edu	2025-11-14	imitation	discuss
eoa5294@psu.edu	2025 - 11 - 21	testimony	present
gks 5496@psu.edu	2025-09-12	obj_perm	discuss

email	date	topic	present_discuss
gks5496@psu.edu	2025-10-24	connectionism	present
jzh6650@psu.edu	2025-09-12	$piaget_traj$	discuss
jzh6650@psu.edu	2025-11-14	gesture	present
kab7845@psu.edu	2025-10-05	$dev_disorders$	present
kab7845@psu.edu	2025-11-14	gesture	discuss
16h5527 psu.edu	2025-10-31	ai_robotics	discuss
165527 psu.edu	2025-11-14	imitation	present
1xd5406@psu.edu	2025-10-31	$gate_input$	present
1xd5406@psu.edu	2025 - 11 - 21	testimony	discuss
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	$rich_interp$	discuss
nsb5522@psu.edu	2025-10-24	a_not_b	present
opb5142@psu.edu	2025-10-05	generalization	present
pxs5614@psu.edu	2025-10-05	$dev_disorders$	discuss
pxs5614@psu.edu	2025-10-31	ai_robotics	present
yqk5318@psu.edu	2025-09-26	$core_knowl$	discuss
${\it zps5262}@{\it psu.edu}$	2025-09-26	$rich_interp$	present
zps5262@psu.edu	2025-10-24	a_not_b	discuss

2025-12-12

```
ratings_long |>
  filter(topic == "poverty_bad", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	student_i	name	topic	rating
2025-08-26 16:11:24	nsb5522@psu.edu	1	Natalie Byrd	poverty_bad	5
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	poverty_bad	4
2025-08-27 16:09:30	${ m opb5142@psu.edu}$	4	Olivia Bell	poverty_bad	5
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	poverty_bad	5
2025-08-28 09:35:18	16h5527 $psu.edu$	6	Hanna Huang	poverty_bad	3
2025-08-28 22:21:09	pxs5614@psu.edu	7	Pratt Srinivasan	poverty_bad	3
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	poverty_bad	4
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	poverty_bad	5
2025-08-29 14:03:01	jzh6650@psu.edu	12	Jinyi He	poverty_bad	5
2025-08-30 07:49:21	${ m zps}5262@{ m psu.edu}$	13	Suzy Su	poverty_bad	3
2025-08-30 11:26:33	${\rm ckl}5780{\rm @psu.edu}$	14	Caesar Liu	poverty_bad	5

timestamp	email	$student_i$	name	topic	rating
2025-08-31 14:28:19	yqk5318@psu.edu	15	Yeonjin Kim	poverty_bad	5

```
ratings_long |>
  filter(topic == "poverty_adaptive", rating >= 3) |>
  arrange(timestamp) |>
  knitr::kable(format = 'html')
```

timestamp	email	$student_i$	name	topic	rating
2025-08-26 16:11:24	nsb5522@psu.edu	1	Natalie Byrd	poverty_adaptive	5
2025-08-27 11:01:47	kab7845@psu.edu	3	Katie Billetdeaux	poverty_adaptive	4
2025-08-27 16:09:30	${ m opb5142@psu.edu}$	4	Olivia Bell	poverty_adaptive	5
2025-08-27 22:49:30	mml5964@psu.edu	5	Makenna Luzenski	poverty_adaptive	5
2025-08-28 09:35:18	16h5527 $psu.edu$	6	Hanna Huang	poverty_adaptive	4
2025-08-29 09:22:04	1xd5406@psu.edu	9	Luke Debec	poverty_adaptive	4
2025-08-29 12:07:38	cfa5368@psu.edu	11	Carlos Almeida	poverty_adaptive	4
2025-08-29 14:03:01	jzh6650@psu.edu	12	Jinyi He	poverty_adaptive	4
2025-08-30 11:26:33	${\rm ckl}5780 {\rm @psu.edu}$	14	Caesar Liu	poverty_adaptive	5
2025-08-31 14:28:19	yqk5318@psu.edu	15	Yeonjin Kim	poverty_adaptive	5

```
presenters[29, 'email'] <- "yqk5318@psu.edu"</pre>
presenters[29, 'date'] <- "2025-12-12"</pre>
presenters[29, 'topic'] <- "poverty_bad"</pre>
presenters[29, 'present_discuss'] <- "present"</pre>
presenters[30, 'email'] <- "opb5142@psu.edu"</pre>
presenters[30, 'date'] <- "2025-12-12"</pre>
presenters[30, 'topic'] <- "poverty_bad"</pre>
presenters[30, 'present_discuss'] <- "discuss"</pre>
presenters[31, 'email'] <- "ckl5780@psu.edu"</pre>
presenters[31, 'date'] <- "2025-12-12"</pre>
presenters[31, 'topic'] <- "poverty_adaptive"</pre>
presenters[31, 'present_discuss'] <- "present"</pre>
presenters[32, 'email'] <- "nsb5522@psu.edu"</pre>
presenters[32, 'date'] <- "2025-12-12"</pre>
presenters[32, 'topic'] <- "poverty_adaptive"</pre>
presenters[32, 'present_discuss'] <- "discuss"</pre>
```

Fixes

Assign jjf6412 to 2025-12-05 role.

```
presenters[27, 'email'] <- "jjf6412@psu.edu"
presenters[27, 'date'] <- "2025-12-05"
presenters[27, 'topic'] <- "naive_psy"
presenters[27, 'present_discuss'] <- "present"
presenters[28, 'email'] <- "TBD"
presenters[28, 'date'] <- "2025-12-05"
presenters[28, 'topic'] <- "naive_psy"
presenters[28, 'present_discuss'] <- "discuss"</pre>
```

By student

```
presenters |>
  # left_join(presenters, student_info, by = 'email') |>
  # arrange(name, email, date) |>
  arrange(email, date) |>
  knitr::kable(format = 'html')
```

email	date	topic	present_discuss
TBD	2025-12-05	naive_psy	discuss
${ m ars}7656@{ m psu.edu}$	2025-09-12	piaget_traj	present
${ m ars}7656@{ m psu.edu}$	2025-10-31	${\it gate_input}$	discuss
cfa5368@psu.edu	2025-09-26	$core_knowl$	present
cfa5368@psu.edu	2025-10-05	generalization	discuss
${\rm ckl}5780 {\rm @psu.edu}$	2025-10-24	connection is m	discuss
${\rm ckl}5780 {\rm @psu.edu}$	2025-12-12	poverty_adaptive	present
eoa5294@psu.edu	2025-11-14	imitation	discuss
eoa5294@psu.edu	2025-11-21	testimony	present
gks5496@psu.edu	2025-09-12	obj_perm	discuss
gks5496@psu.edu	2025-10-24	connection is m	present
jjf6412@psu.edu	2025-12-05	naive_psy	present
jzh6650@psu.edu	2025-09-12	piaget_traj	discuss
jzh6650@psu.edu	2025-11-14	gesture	present
kab7845@psu.edu	2025-10-05	$dev_disorders$	present
kab7845@psu.edu	2025-11-14	gesture	discuss
lfh5527@psu.edu	2025-10-31	ai_robotics	discuss

email	date	topic	present_discuss
lfh5527@psu.edu	2025-11-14	imitation	present
lxd5406@psu.edu	2025-10-31	gate_input	present
lxd5406@psu.edu	2025-11-21	testimony	discuss
mml5964@psu.edu	2025-09-12	obj_perm	present
mml5964@psu.edu	2025-09-26	rich_interp	discuss
nsb5522@psu.edu	2025-10-24	a_not_b	present
nsb5522@psu.edu	2025-12-12	poverty_adaptive	discuss
opb5142@psu.edu	2025-10-05	generalization	present
opb5142@psu.edu	2025-12-12	poverty_bad	discuss
pxs5614@psu.edu	2025-10-05	dev_disorders	discuss
pxs5614@psu.edu	2025-10-31	ai_robotics	present
yqk5318@psu.edu	2025-09-26	core_knowl	discuss
yqk5318@psu.edu	2025-12-12	poverty_bad	present
zps5262@psu.edu	2025-09-26	rich_interp	present
zps5262@psu.edu	2025-10-24	a_not_b	discuss

By date and topic

```
presenters |>
  # left_join(presenters, student_info, by = 'email') |>
  arrange(date, topic) |>
  select(date, topic, email, present_discuss) |>
  knitr::kable(format = 'html')
```

date	topic	email	present_discuss
2025-09-12	obj_perm	mml5964@psu.edu	present
2025-09-12	obj_perm	gks5496@psu.edu	discuss
2025-09-12	$piaget_traj$	${ m ars}7656@{ m psu.edu}$	present
2025-09-12	$piaget_traj$	$\rm jzh6650@psu.edu$	discuss
2025-09-26	$core_knowl$	cfa5368@psu.edu	present
2025-09-26	$core_knowl$	yqk5318@psu.edu	discuss
2025-09-26	$rich_interp$	${ m zps}5262@{ m psu.edu}$	present
2025-09-26	$rich_interp$	mml5964@psu.edu	discuss
2025-10-05	$dev_disorders$	kab7845@psu.edu	present
2025-10-05	$dev_disorders$	pxs5614@psu.edu	discuss
2025-10-05	generalization	cfa5368@psu.edu	discuss
2025-10-05	generalization	${\rm opb5142@psu.edu}$	present
2025-10-24	a_not_b	nsb5522@psu.edu	present

date	topic	email	present_discuss
2025-10-24	a_not_b	zps5262@psu.edu	discuss
2025-10-24	connection is m	gks5496@psu.edu	present
2025-10-24	connectionism	${\rm ckl}5780{\rm @psu.edu}$	discuss
2025 - 10 - 31	ai_robotics	pxs5614@psu.edu	present
2025-10-31	ai_robotics	lfh5527@psu.edu	discuss
2025-10-31	$gate_input$	1xd5406@psu.edu	present
2025-10-31	$gate_input$	${ m ars}7656@{ m psu.edu}$	discuss
2025-11-14	gesture	$\rm jzh6650@psu.edu$	present
2025-11-14	gesture	kab7845@psu.edu	discuss
2025-11-14	imitation	lfh5527@psu.edu	present
2025-11-14	imitation	eoa5294@psu.edu	discuss
2025 - 11 - 21	testimony	eoa5294@psu.edu	present
2025 - 11 - 21	testimony	1xd5406@psu.edu	discuss
2025-12-05	naive_psy	jjf6412@psu.edu	present
2025-12-05	naive_psy	TBD	discuss
2025-12-12	poverty_adaptive	${\rm ckl}5780{\rm @psu.edu}$	present
2025-12-12	poverty_adaptive	${ m nsb5522@psu.edu}$	discuss
2025-12-12	poverty_bad	yqk5318@psu.edu	present
2025-12-12	poverty_bad	opb5142@psu.edu	discuss

QA check

How many students?

```
presenters$email |> unique() |> length()
```

[1] 17

How many topics?

```
presenters$topic |> unique() |> length()
```

[1] 16

How many presenters?

```
presenters |>
  filter(present_discuss == "present") |>
  select(email) |>
  unique() |>
  dim()
```

[1] 16 1

How many discussants?

```
presenters |>
  filter(present_discuss == "discuss") |>
  select(email) |>
  unique() |>
  dim()
```

[1] 16 1

How many speaking opportunities per student?

```
presenters |>
  group_by(email) |>
  summarize(n_sched = n()) |>
  arrange(desc(n_sched)) |>
  knitr::kable(format = 'html')
```

email	n_sched
ars7656@psu.edu	2
cfa5368@psu.edu	2
ckl5780@psu.edu	2
eoa5294@psu.edu	2
gks5496@psu.edu	2
jzh6650@psu.edu	2
kab7845@psu.edu	2
lfh5527@psu.edu	2
lxd5406@psu.edu	2
mml5964@psu.edu	2
nsb5522@psu.edu	2
opb5142@psu.edu	2

email	n_sched
pxs5614@psu.edu	2
yqk5318@psu.edu	2
${\it zps}5262@{\it psu.edu}$	2
TBD	1
jjf6412@psu.edu	1