

01__exl_kickoff

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1 Welcome to Renaissance EXL - Summer 2022 Session Kickoff

June 28, 2022

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1.1 Overview

- **Getting Started**
 1. Intros
 2. What you will do
 3. Final products
 4. Community and Culture
- **Your Research Question**
 1. Refining your topic
 2. Choosing the right question/s
 3. Laboratory research vs. data research

1.2 Getting Started

1.2.1 Intros

Take 2 minutes each to introduce yourself... - Your name - Where you're from (city / school) - What you want to do or study after high school - Your research project - Any interesting hobbies

```
[ ]: from random import choice

def choose_next(names: list, selected: list) -> str:
    """Choose the next person to speak

    Effectively a random choice from a list, without replacement
    """
    available = list(set(names) - set(selected)) # use set() to remove any
    ↪duplicates

    if not available:                             # available is empty: all
    ↪names have been selected
```

```

        print("That's everyone!")
        return
    next_person = choice(available)

    print(f'{len(selected) + 1} of {len(names)}: {next_person}')
    return next_person

all_names = [
    "Aiden",
    "Allison",
    "Bruce",
    "Denali",
    "Hassan",
    "Jon",
    "Justin",
    "Srikar",
    "Trevor",
    "Vianney"
]

already_chosen = []

```

```

[ ]: for i, name in enumerate(already_chosen):
        if name: print(f'{i + 1} of {len(all_names)}: {name}')
    already_chosen.append(choose_next(all_names, already_chosen))

```

1.2.2 What you will do

- Spend 8 weeks to
 1. Develop a research question
 2. Find data that can help you answer that question
 3. Use Python to do your statistical analysis and data visualization
 4. Share your research with the world
- You will need to...
 - Own your research
 - Manage your time
 - Collaborate with others

1.2.3 Final products

1. **Research paper**
 - Describes the background, data sources, methodology, and results
 - About 5-10 pages
2. **Presentation**
 - Summarizes your findings for a general audience
 - We will present at the end of the summer

- Invitations sent to Renaissance employees, teachers at your school, family

3. GitHub repository

- A place online where you will share all of your code and research with the world
- Example: [Shaheer's Air Pollution Study](#)

1.2.4 Community and Culture

Norms

- Learning can be hard
- It requires us to be **open** about the **things we do not know yet**
- Openness requires **trust**
- **Trust** can grow when we all commit to behaving in consistent and mutually beneficial ways

Suggested norms Treat everyone with respect

- Why
 - Respect means showing that you recognize the value of others
 - Everyone's **time** is valuable
 - Everyone's **education** is valuable
 - Everyone's **research** is valuable
- How
 - In meetings, do not multi-task
 - Practice active listening
 - Be aware when we are listening, vs. waiting to talk
 - Ask questions in good faith
 - Assume other's questions are asked in good faith
 - Ask if people are available to support you

Support one another

- Why
 - We all have something to learn and to teach
 - We learn best when others share their knowledge
 - It is right to reciprocate, and share our own knowledge as freely as we can
- How
 - If someone asks a question in Slack that you know the answer to, reply!
 - Share anything interesting you've just learned, especially if you think it can help someone else
 - But also, give people the space they need to learn

What happens in EXL stays in EXL

- Why
 - To learn, we need to feel safe enough to be wrong
 - We feel safer when we know our comments won't be shared widely
- Actions
 - Do not share the opinions, experiences, or struggles of group members outside of EXL
 - If you wish to share another's story, ask them directly for permission first

What do you suggest? What else would help us to build a place where we can all grow, learn, and collaborate?

Drop your ideas in Slack. I'll collect them and bring a draft next week.

1.3 Your Research Question

1.3.1 Refining your topic

Example: Air Pollution

What

- What kinds of air pollution exist?
- How well have each of these been measured?

When

- When did air quality see major changes?
- When did people start paying attention to air pollution?
- What laws or policies have been enacted to address pollution?
- How frequently do people collect data about air quality?

Where

- Which areas are most impacted by air pollution?
- Which areas are least impacted by air pollution?
- What are some similarities and differences between these?

Why

- What can we even do about air pollution?
- Which factors are most easily addressed with information or technology?
- Which factors are outside of humans' control right now?

1.3.2 Choosing the right question/s

- What data actually exists?
- What data can be trusted?
- How does this impact you and/or people you care about?
- What change do you want to see because of your research?

1.3.3 Laboratory research vs. data research

Laboratory research

- Design an experiment to collect data
- Can control for many variables
- Analyze the data we collect

Data research In data research, we are more limited by the data available.

- We must find good data in the world...
 - Government institutions
 - University studies
 - News media companies
 - Occasionally, private companies
- How do we know what can be trusted?
- How do we know what makes data good?

1.4 Wrap Up

1.4.1 To-Dos

1. Continue working on your [Research Question Guide](#)
2. **Share the Guide** with me and your Coach
3. Introduce yourself to your coach with a **DM in Slack**
4. Schedule a meeting with your coach in the next 2 days
5. Make sure you have Anaconda and GitHub Desktop installed

1.4.2 Coach Assignments

	Coach	Email
Trevor	Bruce	bruce.bray@renaissance.com
Aiden	Jon	jon.stelman@renaissance.com
Hassan	Jon	jon.stelman@renaissance.com
Srikar	Jon	jon.stelman@renaissance.com
Allison	Justin	justin.alt@renaissance.com
Vianney	Justin	justin.alt@renaissance.com
Denali	Justin	justin.alt@renaissance.com

2 Thank you!