CO408 Privacy Engineering - Part I handbook

Live sessions: Monday and Friday 10am-12pm UK time.

We will follow a reverse classroom schedule where you **watch the lecture and work on the exercise session on your own**. We will then **answer questions** in two live sessions on Monday (theory questions on this week's lecture and exercises) and Friday (questions on the exercises). Piazza will be our communication tool.

Live sessions:

- For the live sessions we will use Microsoft Teams (team name: *COMP97012/97013 - Privacy Engineering (Autumn 2020-2021)*).

Materials:

- The recording of the lectures are available on Panopto. We will also record the live sessions and make them available on Panopto.
- All the slides and exercises are available on the Dropbox folder at https://bit.ly/CO408
- Finally, the solution for the lab exercises will be posted on Dropbox on Monday evening.

Teaching team:

- Yves-Alexandre de Montjoye (Lecturer)
- Ana-Maria Cretu (GTA)
- Andrea Gadotti (GTA)
- Florimond Houssiau (GTA)

We are all members of Imperial's Computational Privacy Group.

Note 1: **please do not email us individually for questions on the class** (except if you'd like to discuss something personal or give us feedback on the course, in which case please email Yves-Alexandre at demontjoye@imperial.ac.uk). Instead, ask your question on Piazza. We will be closely monitoring the forum throughout the course. This will allow everyone to see what might be less clear and everyone's answers including ours.

Note 2: We do not ask you to send us solutions for the lab exercises. These are exercises designed to reinforce the understanding of the theory (and have fun). Try to solve as many exercises as possible! Also, collaboration is encouraged.

Give us feedback: This is a new model we're trying out this year. Please let us know what you think, what works well, and what could be improved. We'll be improving the model over the year and feedback is much appreciated.

Practical requirements

In this course, the practical exercise sessions will be carried out using Jupyter notebooks. Instructions for installing jupyterlab will be provided in the first lab session.

1. Open a terminal (Ctrl-Alt-T). Make sure you are in your home folder:

    cd $HOME

2. To install Jupyter, run the following command in the terminal:

    python3 -m pip install jupyterlab numpy scipy matplotlib pandas

3. To launch it, use:

    $HOME/.local/bin/jupyter-lab

Schedule

Week 1 - October 12:
Before the Monday live session:

- Watch the short *Week 0 - Intro to Privacy* lecture
- If you need a refresher on python and/or pandas and matplotlib, go through the short lab 0 notebook
- Watch the *Week 1 - Data pseudonymization and anonymization*
- Solve the exercises from the lab 1 notebook. The solutions will be posted on Monday evening.
- Prepare your questions about the content of the lecture or (theoretical content of the) exercise session.

Before the Friday live session:

- Complete the lab 1 notebook.
- Make sure you ask any remaining questions you'd have on the lab notebooks before the session

Week 2 - October 19:
Before the Monday live session:

- Watch the *Week 2 - Big Data anonymization*
- Solve the exercises from the lab 2 notebook
- Prepare your questions about the content of the lecture or (theoretical content of the) exercise session.

Before the Friday live session:

- Make sure you ask any remaining questions you'd have on the lab notebooks before the session

Week 3 - October 26:

Before the Monday live session:

- Watch the *Week 3 - Query-based systems*
- Solve the exercises from the lab 3 notebook
- Prepare your questions about the content of the lecture or (theoretical content of the) exercise session.

Before the Friday live session:

- Make sure you ask any remaining questions you'd have on the lab notebooks before the session

Week 4 - November 2:

Before the Monday live session:

- Watch the *Week 4 - Formal privacy guarantees*
- Solve the exercises from the lab 4 notebook
- Prepare your questions about the content of the lecture or (theoretical content of the) exercise session.

Before the Friday live session:

- Make sure you ask any remaining questions you'd have on the lab notebooks before the session