PGR Methods and Skills Bootcamp

Welcome!

Ana Matran-Fernandez

26 November 2018

Institute for Analytics and Data Science
University of Essex

Table of contents

Introduction

Viola Fanfani
`v.fanfani`

Spyros Samothrakis
`ssamot`

Ana Matran (Me!)
`amatra`

IADS | The Institute for
Analytics and Data Science

Can you let us know your...?

- Name
- Background
- Expectations for this course

Teaching you essential research skills through ...

- an intensive *immersion* in a research project,
- *collaboration* with other PGR students,
- mentoring,
- and *hard work*.

We'll introduce you to a series of tools that can make your life as a researcher/data scientist easier:

- Programming (using Python)
- Statistics
- LaTeX (through Overleaf)
- Version Control (using GitHub)
- Collaboration and management tools (Trello and Slack)

IADS | The Institute for Analytics and Data Science

Schedule

In general:

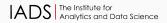| Start	End	Plan
9.00	10.45	We talk
11.15	13.00	We talk
14.00	17.00	Lab work

(With some exceptions)

- 9.00 – 10.45: Introduction to the Bootcamp
- 11.15 – 13.00: Basic concepts in programming
- 14.00 – 17.00: We move to the lab
    - Set up accounts on Trello, Github, Slack
    - Python practice

- 9.00 – 10.45: Scientific programming in Python (I): Numpy, Scipy
- 11.15 – 13.00: Scientific programming in Python (II): Pandas, Seaborn
- 14.00 – 17.00: Python practice in the lab

- 9.00 – 10.45: Introduction to Machine Learning and sklearn (I)
- 11.15 – 13.00: Introduction to Machine Learning and sklearn (II)
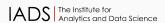- 14.00 – 17.00: Statistics in the lab (I)

IADS | The Institute for Analytics and Data Science

Full lab day

- 9.00 – 10.45: Machine Learning practice in the lab (I)
- 11.15 – 13.00: Machine Learning practice in the lab (II)
- 14.00 – 17.00: Research methods
    - LaTEX
    - Zotero, Mendeley, Google Scholar

IADS | The Institute for
Analytics and Data Science

- 9.00 – 10.00: You'll be assigned to a group and a group project
- 10.00 – 14.00: Statistics in the lab (II)
- 15.00 – 17.00: Logistics for the second week; How to write a research paper

- Work in groups on your assigned project.
- (At least) 2 hours/day face-to-face support from us:
    - Monday: 2.30–5pm - Ana
    - Tuesday: 10–12am - Spyros
    - Wednesday: 3–5pm - Ana
    - Thursday: 10–12am - Viola

- Also by email
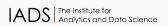- Friday 10–12am: presentations

Code of Conduct

We best serve each other when we allow each other the freedom to be as we are; only on the basis of equality —between genders, nationalities or other differences— can we work together cooperatively; and when we are united as a society can we work towards the good of all.

We are committed to creating a safe experience and will not tolerate harassment of participants in any form.

Includes, but is not limited to:

- Sexual language and imagery
- Jokes and acts that insult or belittle other participants in any way
- Offensive verbal comments related to gender, gender identity and expression sexual orientation, ability, physical appearance, body size, race, ethnicity, religion, socioeconomic status
- Deliberate intimidation, stalking, and following
- Unwarranted photography or recording
- Sustained disruption of event programming
- Inappropriate physical contact
- Unwelcome sexual attention
- In any way, creating a sexualised environment

- Talk to one of us or send us an email
- We will ensure you are safe and cannot be overheard.
- We may involve other University staff to ensure your report is managed properly.
- We will handle your report respectfully.
- You can bring someone to support you.
- You won't be asked to confront anyone and we won't disclose your identity.

- 9.00 – 10.45: Introduction to the Bootcamp
- 11.15 – 13.00: *Basic programming concepts*
- 14.00 – 17.00: Lab work
    - Set up accounts on Trello, Github, Slack
    - Python practice