Instrument Data Scientists

Instrument Data Scientists

Who are they

Img & Eng

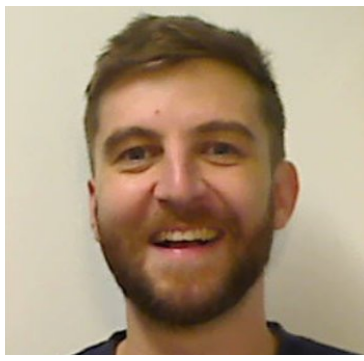Spectroscopy

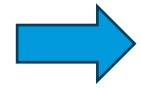Reflectometry

Søren

Greg

Andrew (Aug 11 '23)

Nicolò (Aug 12 '24)
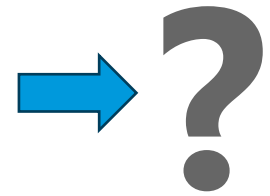
Diffraction

NMX

SANS

Céline

Aaron

Wojtek

?

Requested approval for:
+2 for diff. & img.
+2 for spectroscopy

2024-05-22

Role of the Instrument Data Scientists

Science

- Developing data science and analysis methods

  - advancing the cutting-edge of their domain

- Establishing a scientific research programme

Project Coordination

- DMSC deliverables to their respective instrument teams (bridging instrument teams and DMSC developer teams)

- Participate in the construction projects of their respective instruments

User Support

- Provide direct support to the science program advancing the cutting-edge of their domain

- Assist scientific users with analysis of collected data

- Assist scientific users with planning experiments prior to proposal

- Assist instrument teams with creating and maintaining a world leading user program

- Be local contact for select experiments

Two overlapping scientists groups

Requirements, feedback

- *User support*

- *Research collaboration with universities and RIs*

- *Software engineering*

- *Development collaboration with RIs & universities*

Instrument Data Scientists Group

Data Reduction, Analysis, Modelling Group

Scope
- Data reduction
- Data analysis
- Instrument simulations
- Materials modelling
- Data science

Software solutions

Concluding remarks

- The Instrument Data Scientists are crucial for:
  - getting functional DMSC deliverables
  - bridging instrument teams and DMSC developer teams
  - collaboration with universities (may be affiliated)
  - facilitating generation of results from data

- The Instrument Data Scientist role will change as we approach SOUP

- We will recruit more Instrument Data Scientists
  - … and need to ensure we cover a wide spectrum of expertise

Questions