

Session 3

The third session of the LSSTC DSFP focuses on software engineering and data management.

Schedule

Links to instructor GitHub repos are denoted by :octocat:; links to lectures on YouTube are denoted with :movie_camera:

Day 1 — Building and Testing Code Repositories

Monday, Apr 24, 2017

- 08:00 AM - 09:00 AM o Registration
- 09:00 AM - 09:30 AM o Introduction to LSSTC; P. Eliason
- 09:30 AM - 10:00 AM o Introduction to new instructors
- 10:00 AM - 10:30 AM o [Review of databases from Session 1](#); A. Miller :octocat: :movie_camera: — [Solutions](#)
- 10:30 AM - 11:00 AM o Break (coffee?)
- 11:00 AM - 12:00 PM o [Review of version control/software engineering from Session 1](#); A. Miller :octocat: :movie_camera: — [Solutions](#)
- 12:00 PM - 01:30 PM o LUNCH
- 01:30 PM - 02:30 PM o [Introduction to code repositories](#); E. Tollerud :octocat: :movie_camera:
- 02:30 PM - 04:00 PM o [Problem: building code repositories #2](#); E. Tollerud
- 04:00 PM - 04:30 PM o Break
- 04:30 PM - 06:00 PM o [Unit tests and continuous integration](#); E. Tollerud :octocat: :movie_camera: — [Problems](#), [Solutions](#)
- 06:00 PM - ??:?? PM o NOAO welcome reception

Day 2 — Software and Database Functionality

Tuesday, Apr 25, 2017

- 09:00 AM - 10:00 AM o [Object Oriented Programming](#); C. Hummels :octocat: :movie_camera:

- 10:00 AM - 10:30 AM o Break
- 10:30 AM - 12:00 PM o [Problem — OOP](#); C. Hummels [:octocat:](#) — [Solutions](#)
- 12:00 PM - 01:30 PM o LUNCH
- 01:30 PM - 04:00 PM o [Making Databases Work for You](#); Y. AlSayyad [:octocat:](#) [:movie_camera:](#) — [Problems](#)
- 04:00 PM - 04:30 PM o Break
- 04:30 PM - 06:00 PM o [Software documentation](#); E. Tollerud [:octocat:](#) [:movie_camera:](#) — [Problems](#)
- 06:00 PM - ??? PM o Group dinner

Day 3 — Introduction to Data Management

Wednesday, Apr 26, 2017

- 09:00 AM - 10:00 AM o [Data Management — Big & Small](#); Y. AlSayyad [:octocat:](#) [:movie_camera:](#)
- 10:00 AM - 10:30 AM o Break
- 10:30 AM - 12:00 PM o [Problem — data management](#); Y. AlSayyad [:octocat:](#)
- 12:00 PM - 01:00 PM o LUNCH
- 01:00 PM - 03:00 PM o Tour of the UA mirror lab (optional)
- 03:00 PM - ??? PM o BREAK

Day 4 — Introduction to Software Scaling Problems and Solutions

Thursday, Apr 27, 2017

- 09:00 AM - 10:00 AM o [Profiling Python Software](#); C. Hummels [:octocat:](#) [:movie_camera:](#)
- 10:00 AM - 10:30 AM o Break
- 10:30 AM - 12:00 PM o [Problem -- Profiling Python Software](#); C. Hummels [:octocat:](#) — [Solutions](#)
- 12:00 PM - 01:30 PM o LUNCH
- 01:30 PM - 03:00 PM o [Algorithm Development and Parallel Programming in Python](#); C. Hummels [:octocat:](#) [:movie_camera:](#) — [Problems](#)
- 03:00 PM - 03:30 PM o Break
- 03:30 PM - 03:45 PM o [PEP8 Style Guide for Python](#); E. Tollerud [:octocat:](#) [:movie_camera:](#)
- 03:30 PM - 04:30 PM o [Coping with Streaming Data - ANTARES](#); G. Narayan [:octocat:](#) [:movie_camera:](#)
- 04:30 PM - 06:00 PM o [Problem -- build mini-ANTARES](#); G. Narayan [:octocat:](#) & A. Miller [:octocat:](#) — [Solutions](#)

Day 5 — Managing and Analyzing Large Data Sets

Friday, Apr 28, 2017

- 09:00 AM - 10:00 AM o [Data Management at Scale — trends from industry](#); Y. AISayyad [:octocat:](#)
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- 10:00 AM - 10:30 AM o Break
- 10:30 AM - 12:00 PM o [Introduction to Computation at Scale — NSF resources](#); N. Merchant
[:movie_camera:](#)
- 12:00 PM - 01:00 PM o LUNCH
- 01:00 PM - 01:45 PM o Introduction to DataLab; S. Juneau, K. Olsen [:octocat:](#), R. Nikutta [:octocat:](#)
[:movie_camera:](#)
- 01:45 PM - 05:30 PM o Hack Session w/ DataLab
- 05:30 PM - 06:00 PM o Hack tag-up & Meeting wrap up