

DS 7347

# High-Performance Computing (HPC) and Data Science

## Session 21

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Robert Kalescky

Adjunct Professor of Data Science

HPC Research Scientist

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Research and Data Sciences Services

Office of Information Technology

Center for Research Computing

Southern Methodist University



Group Discussion

Session Question

Common Data Structures

Readings and Assignments

## Group Discussion

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- Explore various file formats for your data and compare performance

## Session Question

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Describe as many places as you can to store data on an HPC system.

## Common Data Structures

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- Disks
- Distributed file systems
- Memory
- Caches





- Physical data location
- Data access patterns



- Lists
- Dictionaries
- “Array of Structures”
- “Structure of Arrays”
- Tables

## Readings and Assignments

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## Readings

None

## Project

- Complete non-optimized and basic workflow, reduce data or analysis complexity if needed.
- Commit the code to your project repo
- Due Tuesday, July 12.