

# HDCC Sandbox Workshop

The **Data Analysis Tools & Statistics HDCC (DATS-HDCC) Workshop** (first offered at the HBCD Conference, San Diego, March 2026) trains early-career researchers in best practices for reproducible analysis of large-scale, open-access brain imaging and phenotypic datasets within the HDCC infrastructure. Participants learn how to analyze high-dimensional neuroimaging and behavioural datasets to identify meaningful associations across brain structure and function, cognitive functions, and mental health outcomes.

During this session, participants:

- Learn how to access HBCD data through the [NBDC Data Access Platform](#)
- Connect to the HDCC Sandbox environment
- Perform example analyses using RStudio and Jupyter Notebook

## Course Goals and Objectives

- **Knowledge of HDCC:** Learn to access and use the NBDC databases and understand analytical and statistical considerations specific to the HBCD dataset.
- **Conducting Brain-Wide Association Studies (BWAS) in the Sandbox:** Learn basic principles and analysis methods for BWAS, and can conduct integrative analyses in R via RStudio or python via jupyter notebooks.
- **Reproducible Scientific Research:** Develop best practices for transparent and reproducible neuroimaging research, including well-documented workflows, clear coding practices, and interpretable analytic pipelines.
- **Interdisciplinary Collaboration:** Foster collaboration between early-career researchers, data scientists, and domain experts working with large-scale brain and behavioral datasets.

## Recommended Background Experience

1. Training in at least one relevant area such as statistics, bioinformatics, neuroscience, or a related field
2. Basic experience with R or Python (helpful but not strictly required)