

## NITheCS MINI-SCHOOL

# Mastering Pandas: An in-depth Guide in Data Science Techniques for Researchers

Binjamin Barsch (Centre for High Performance Computing)

**Wednesday 5, 12, 19 and 26 April 2023 | 14h00 – 15h00 SAST**

### ABSTRACT

This is a comprehensive mini-school designed for researchers who are seeking to become proficient in the use of Pandas for data science and data analysis applications. This mini-school covers various Pandas techniques in data manipulation, wrangling, and analysis. It provides step-by-step instructions and practical examples to enable the researcher to master various Pandas techniques, including data aggregation, filtering, sorting, and merging. It also covers time series analysis, visualization, statistical modelling, and managing varied datasets types.

The mini-school aims to provide a thorough understanding of the inner workings of Pandas, including the DataFrame and Series data structures, as well as the ability to apply this knowledge in solving real-world data science problems. This mini-school is aimed at those who are familiar with Python and Pandas. By the end of the mini-school, attendees should have learnt skills to analyse their datasets more effectively and derive meaningful insights.

#### Lecture 1 (5 April)

Overview of Pandas data structures, data manipulation, filtering, and aggregation

#### Lecture 2 (12 April)

Data wrangling, merging, joining, and time series analysis

#### Lecture 3 (19 April)

Data visualization, statistical modelling, and managing varied datasets types

#### Lecture 4 (26 April)

Advanced data analysis techniques, and real-world applications



**REGISTER TO  
ATTEND**

Visit <https://bit.ly/3UaHICx>  
or scan/click:



**MEET THE SPEAKER AFTER  
THE LECTURE:**

visit [kumospace.com/nithecs\\_social](https://kumospace.com/nithecs_social)

### BIOGRAPHY

Binjamin (pronounced Binyamin) is the Lead Software Engineer at the Centre for High Performance Computing (CHPC), a research centre that forms part of the CSIR. He holds a BEng in Mechatronic Engineering from Stellenbosch University and a MEng degree in Radar Digital Signal Processing from UCT. He has worked for leading tech companies focusing in the fields of electronic engineering, data science, and software development. His current role at the CHPC involves leading software engineering architecture, and the design and development of high performance computing (HPC) support software. He also leads the annual Coding Summer School which focuses on training researchers in fundamental programming skills to assist with their research.

He has two main research interests. The first is digital signal processing for Internet of Things (IoT) applications and the second is natural language processing for African Languages.

View [LinkedIn profile](#)