# Preparation for Workshops

## Tidymodels Metapackage in R Workshop (Monday)

Aaron Maxwell of West VirginiaView will be leading a 2-hour workshop during our annual meeting relating to using the tidymodels metapackage in R to implement machine learning experiments. If you would like to follow along during the meeting, here is a link to the materials (~1.5 GB): https://www.dropbox.com/t/Jsz6ROftz4MVuGee.

A few notes on the materials:

1. All the required data have been provided in the included accAssessment and monWS folders.
2. The workshop has been rendered to a HTML webpage: tidymodelsWorkshop.html
3. The original Quarto document has also been provided: tidymodelsWorkshop.qmd

If you would like to follow along, you will need to install the following on your laptop:

1. R: https://cran.r-project.org/
2. RStudio IDE: https://posit.co/download/rstudio-desktop/

You will need the following packages:

1. tidymodels
2. tidyverse
3. terra
4. tmap
5. tmaptools
6. micer
7. ranger
8. kernlab

Packages can be installed in the R console in RStudio using install.packages("PACKAGE NAME"). Alternatively, they can be installed in RStudio using Tools à Install Packages.

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## Synthetic Aperture Radar Workshop (Wednesday)

Mohamed Aly of ArkansasView will be leading a SAR (Synthetic Aperture Radar) workshop using the European Space Agency's (ESA) SNAP (Sentinel Application Platform) software for processing SAR data. To ensure all attendees are fully prepared, please follow the installation steps below to get the SNAP software up and running on their computers.

**1. Download the SNAP Installer:**

- Visit the official SNAP website: https://step.esa.int/main/download/snap-download/
- On the download page, select the appropriate installer for your operating system (Windows, macOS, or Linux).
- I recommend installing "All Toolboxes".

**2. Install the Software:**

- **Windows:**
    - Once the installer file is downloaded, run it and follow the on-screen instructions.
    - You may be prompted to install Java if it isn't already on your system. SNAP requires Java Runtime Environment (JRE) to function correctly. The installer will guide you to install it if needed.
- **macOS:**
    - After downloading the installer, open the .dmg file and drag the SNAP application into your Applications folder.
    - You may also need to install Java if it's not already available on your Mac. The SNAP installer should prompt you for this.
- **Linux:**
    - Download the appropriate .tar.gz file and extract it to a directory of your choice.
    - Open a terminal and navigate to the directory where you extracted SNAP.
    - Run the SNAP installer with the command ./install.sh.

**3. Launch SNAP:**

- Once installation is complete, launch the SNAP software. You should now be able to access the main interface for processing SAR data.

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4. **Download Additional Materials**

Please make sure to complete the installation process and update to the latest release before the workshop time.