



# HEC-DSS and R

**Disclaimer: not a tutorial**

# Brief Background + Call to Action

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- Used widely by California DWR

# pyhecdss

- Python package for reading/writing HEC-DSS files
- Maintained by DWR Delta Modeling Section
- From README...
  - “HEC-DSS is an ancient database used by the Army Corps of Engineers and prevalent in water related models.”



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- Uses Swig to call HEC-DSS C library from Python
- Relies on pre-compiled libraries
  - Distribution of HEC-DSS source is not allowed
- Alternative package: pydsstools

# dssrip

- R package that reads data from HEC-DSS files by making calls to the Java methods exposed in HEC-DSSVue's scripting capability
- “dssrip is being significantly rewritten to fix a number of issues with the latest versions of rJava and R itself”
- Finicky installation process

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  - Any Java experts in the Data Science PWT?

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- Create example Python scripts & tutorials targeted at R users
  - Embrace polyglot solution with pyhecdss or pydsstools
- Become familiar with rJava (or Java more generally) to contribute to improvement of dssrip package
  - Any Java experts in the Data Science PWT?
- Develop new R package that interfaces with HEC-DSS C library
  - Any C experts in the Data Science PWT?
  - Anybody with experience wrapping C library in R package?