File Input/Output

Arni Magnusson

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Outline

Read and Write Data
text files, R binary files, zip files

Good Practices
CSV, RDS, relative path, filenames

Online Files
read directly, download

Database Connections
DBI, RODBC, MSSQL

Read and write data

Text files

```
read.table    write.table
read.csv      write.csv
```

R binary files

```
load       save
readRDS    saveRDS
```

Zip files

```
unzip
```

Good practices

CSV *comma-separated values*

For tabular data

Easy to open as spreadsheet for non-technical users

RDS

Non-tabular data

One object in one file

No danger of overwriting objects in workspace

No confusion over what objects were imported

Good practices

Relative path

`data/numbers.csv`

`../data/numbers.csv`

Not `c:/my/personal/path/data/numbers.csv`
which would prevent other people from running the analysis

Filenames

Many operating systems are case-sensitive:

.R	*script*
.RData	*many objects*
.rds	*one object*

Online files

Read directly

```
read.csv("https://example.com/numbers.csv")
```

Download

```
download.file("https://example.com/numbers.csv", "numbers.csv")
```

Database connections

DBI	general package for RMySQL, RPostgreSQL, ROracle
RODBC	general package for ODBC connections
MSSQL	tools to work with Microsoft SQL Server Databases

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