Zurich Meetup
Why KNIME and R?

R

- Powerful statistics
- Leading edge algorithms
- Powerful/flexible graphics
- Widely accepted language

KNIME

- Intuitive graphical programming
- Open source analytics
- Vibrant communities
- Cross platform
- Enterprise grade solutions for deployment
- Strong Extract-Transform-Load
- Integrates many tools

Open for Innovation
Integration details

- Moved to “Core” in KNIME 2.10.
- Bridge based on rJava and JRI
  - http://cran.r-project.org/web/packages/rJava/index.html
- Can be used with bundled or external R integrations
The Interactive Editor

Columns

Variables

Code Editor

Workspace Overview

Console
Code templates
Metanodes
R Nodes in KNIME

- Different input and output options
- Grey ports enable workspace branching
Nodes: R Source

- Get data from an R data frame
- Assign output to a data frame named knime.out
- Use with foreign, RCurl, or ...
Node: R Snippet

R Script

```r
# Reference a column in your table here.
column = knime.in$"Sepal.Length"

data = knime.in
# Add the cumulative sum of all values in your column
data$"cumsum(Sepal.Length)" <- cumsum(column)

knime.out <- data
```

Generic data manipulation
Edit tables or workspaces
Derive knime.out from knime.in
Use for cumulative stats, plyr, or ...
Node: R Snippet

- Use R models in KNIME
- Learner (knime.model) & Predictor motif
- R to PMML support for model portability
Nodes: R View

- Generic R plots
- Plot(knime.in)
- Use with many packages including ggplot2
Example 1: Choropleth of KNIME Downloads
Example 2: Dose-Response modeling
The End

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