



**putior**

PUT + Input + Output + R

Extract beautiful workflow diagrams from your code annotations. Works with R, Python, SQL, Shell, and Julia.

#### Quick Start

```
# 1. Add annotation
# put label:"Load Data",
#   output:"clean.csv"
```

```
# 2. Generate diagram
library(putior)
put_diagram(put("./"))
```

#### Annotation Syntax

```
Basic Format
# put key:"value", key:"value"
Minimal (label only)
# put label:"My Step"
ID auto-generated, type = "process"
Full Annotation
# put id:"step1", \
  label:"Load Data", \
  node_type:"input", \
  input:"config.json", \
  output:"data.csv"
```

```
show_workflow_boundaries=TRUE) \end{verbatim}
\end{multicols}
```

**Alternative Formats**

```
# put label:"Step" # Standard (matches logo)
#put label:"Step" # Also valid (no space)
#put! label:"Step" # Pipe separator
#put: label:"Step" # Colon separator
```

#### Node Types & Shapes

Type	Shape	Use For
input	( [ ] )	Data sources
process	[ ]	Transforms
output	[ [ ] ]	Reports
decision	{ }	Branching
start	((orange))	Entry
end	((green))	Exit

#### Annotation Fields

Field	Req?	Default
id	No	Auto UUID
label	Rec.	None
node_type	No	"process"
input	No	None
output	No	File name

#### File Artifacts

```
# Multiple files
output:"data.csv, log.txt"
```

```
# Variable tracking
output:"result.internal"
.internal = in-memory only
```

#### Connecting Scripts

```
# Script A outputs file
# put label:"Fetch",
#   output:"data.csv"
```

```
# Script B reads that file
# put label:"Process",
#   input:"data.csv"
```

#### Key Functions

```
Core Workflow
# Extract annotations
workflow <- putt("./src/")
workflow <- putt("script.R")
workflow <- putt("./",
  recursive = TRUE)
```

```
# Generate diagram
put_diagram(workflow)
put_diagram(workflow,
  theme = "github")
```

```
Auto-Annotation
# Auto-detect from code
put_auto("./src/")
```

```
# Generate annotation text
put_generate("./src/")
put_generate("./src/",
  output = "clipboard")
```

```
# Merge manual + auto
put_merge("./",
  merge_strategy = "supplement")
```

```
Output Options
# Console (default)
put_diagram(wf)
```

```
# Copy to clipboard
put_diagram(wf,
  output = "clipboard")
```

```
# Save to file
put_diagram(wf,
  output = "file",
  file = "diagram.md")
```

```
Interactive Features
# Show source file info
put_diagram(wf,
  show_source_info = TRUE)
```

```
# Clickable nodes (VS Code)
put_diagram(wf,
  enable_clicks = TRUE,
  click_protocol = "vscode")
```

#### Diagram Options

```
Themes
light | dark | auto | github | minimal
put_diagram(wf, theme="github")
```

```
Directions
TD (top-down) | LR (left-right)
BT (bottom-top) | RL (right-left)
put_diagram(wf, direction="LR")
```

```
Visualization Modes
# Simple (script connections)
put_diagram(wf)
```

```
# With data artifacts
put_diagram(wf,
  show_artifacts = TRUE)
```

```
# With file labels on edges
put_diagram(wf,
  show_files = TRUE)
```

```
# Workflow boundaries
put_diagram(wf,
  show_workflow_boundaries=TRUE)
```

#### Example Workflows

##### Simple Linear Pipeline

```
# 01_fetch.R
# put label:"Fetch Sales Data",
#   node_type:"input",
#   output:"sales.csv"

# 02_clean.py
# put label:"Clean Data",
#   input:"sales.csv",
#   output:"clean.csv"

# 03_report.R
# put label:"Generate Report",
#   node_type:"output",
#   input:"clean.csv"
```



##### Branching & Merging

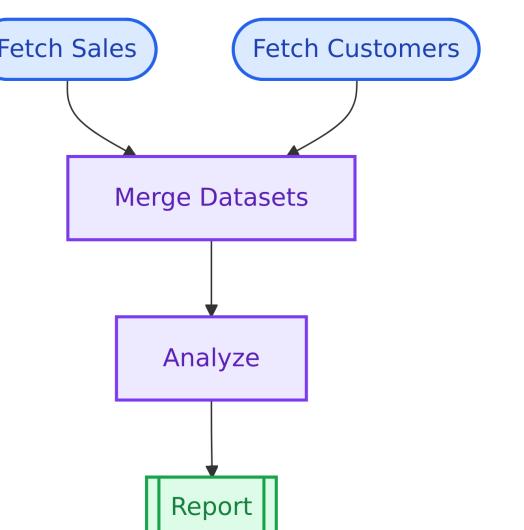
```
# 01_fetch_sales.R
# put label:"Fetch Sales",
#   node_type:"input",
#   output:"sales.csv"

# 02_fetch_customers.R
# put label:"Fetch Customers",
#   node_type:"input",
#   output:"customers.csv"

# 03_merge.R
# put label:"Merge Datasets",
#   input:"sales.csv, customers.csv",
#   output:"merged.csv"

# 04_analyze.py
# put label:"Analyze",
#   input:"merged.csv",
#   output:"stats.json"

# 05_report.R
# put label:"Report",
#   node_type:"output",
#   input:"stats.json"
```

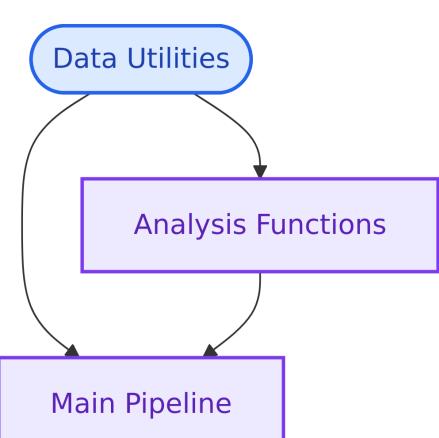


##### Modular source() Pattern

```
# utils.R - Utility functions
# put label:"Data Utilities",
#   node_type:"input"

# analysis.R - Uses utils
# put label:"Analysis Functions",
#   input:"utils.R"

# main.R - Orchestrates both
# put label:"Main Pipeline",
#   input:"utils.R, analysis.R",
#   output:"results.csv"
```



##### Decision/Branching Logic

```
# start.R
# put label:"Load Config",
#   node_type:"start",
#   output:"config.json"
```

```
# check.R
# put label:"Validate Data?",
#   node_type:"decision",
#   input:"config.json"
```

```
# path_a.R
# put label:"Full Analysis",
#   input:"config.json",
#   output:"full.csv"
```

```
# path_b.R
# put label:"Quick Summary",
#   input:"config.json",
#   output:"summary.csv"
```

```
# end.R
# put label:"Complete",
#   node_type:"end",
#   input:"full.csv, summary.csv"
```

