

# putior Cheatsheet

## Workflow Visualization from Code Annotations



putior

PUT + Input + Output + R

Extract beautiful workflow diagrams from your code annotations. Works with R, Python, SQL, Shell, Julia, JavaScript, Go, Rust, and 20+ more languages.

### Quick Start

```
# 1. Add annotation to your code
# 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"
```

### Alternative Formats

```
# put label:"Step" # With space
#put label:"Step" # No space
#put| label:"Step" # Pipe
#put: label:"Step" # Colon
```

### 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 <- put("./src/")
workflow <- put("script.R")
workflow <- put("./",
  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("./src/",
  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 (9 available)

Standard: light | dark | auto | github | minimal

Colorblind-safe: viridis | magma | plasma | cividis

```
put_diagram(wf, theme="github")
put_diagram(wf, theme="viridis")
```

#### 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)
```

Also: show\_workflow\_boundaries

## 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

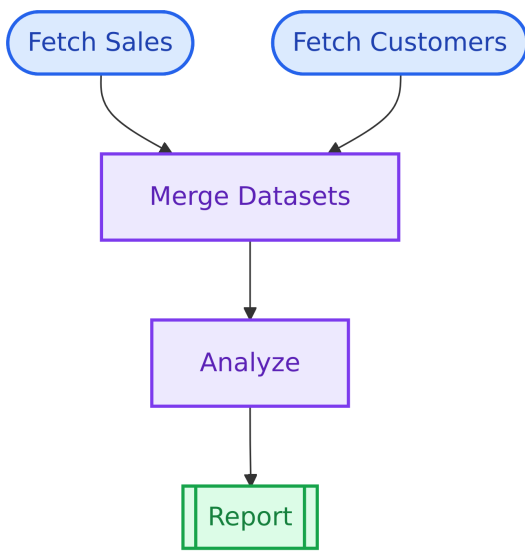
```
# 01_fetch_sales.R
# put label:"Fetch Sales",
  node_type:"input",
  output:"sales.csv"
```

```
# 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"
```

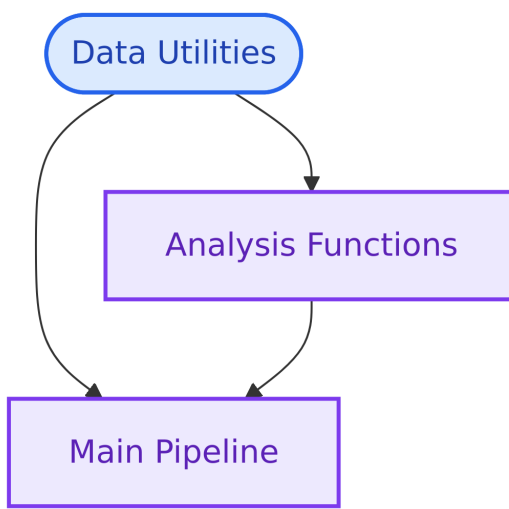


### Modular source() Pattern

```
# 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"
```

