

```

python_called_from_native
def python_calling_native():
    mymod.say('Python calling native')
    natmod.callback(python_called_from_native)

def python_called_from_native():
    mymod.say('Python called from native')
    a_natobj = natmod.NatObj()
    a_natobj.frob(a_natobj)

python_calling_python()

from ctypes import *
try:
    natmod_dll = windll.LoadLibrary("natmod.pyd")
    
```

```

TestModule.cpp
(Global Scope)
#include "stdafx.h"

static PyObject* natmod_callback(PyObject* self,
    PyObject* volatile result = PyObject_CallObj
return result;

static PyObject* natmod_debug_break(PyObject* se
    if (IsDebuggerPresent()) {
        __debugbreak();
    }
    Py_RETURN_NONE;

static PyObject* natmod_crash(PyObject* self, Py
    ++*(volatile char*)nullptr;
    
```

```

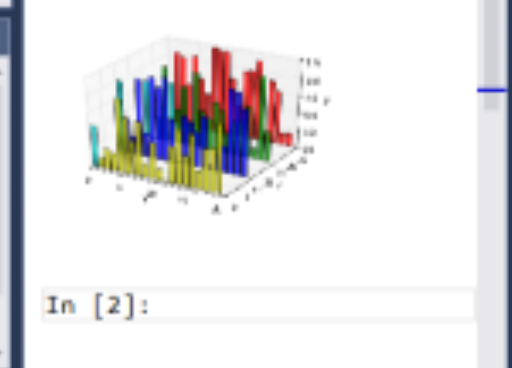
Python 2.7 Interactive
...: # the first bar
of each set will be colored
cyan.
...: cs = [c] * len
(xs)
...: cs[0] = 'c'
...: ax.bar(xs, ys,
zs=2, zdir='y', color=cs,
alpha=0.8)
...:
...: ax.set_xlabel('X')
...: ax.set_ylabel('Y')
...: ax.set_zlabel('Z')
...:
...: plt.show()
...:
    
```

Locals

| Name | Value | Type |
|-------------|---|-------|
| self | 0x02898120 {ob_refcnt=6 ob_type=0x1e_objec | |
| [Python vie | <module object at 0x02898120> | modul |
| ob_refcnt | 6 | int |
| ob_type | 0x1e23ee28 {python33.dll_typeobject P_typeo | |
| arg | 0x02899390 {ob_refcnt=2 ob_type=0x1e_objec | |
| result | 0x0027fba8 {ob_refcnt=42584100 ob_ty_objec | |

Call Stack

| Name | Lang |
|---|------|
| main.py/python_called_from_native Line 158 | Pyth |
| [External Code] | |
| natmod.pyd/natmod_callback_object * self, _object * arg) Line 4 | C++ |
| [External Code] | |
| main.py/python_calling_native Line 153 | Pyth |
| main.py/python_calling_python Line 149 | Pyth |
| main.py/<module> Line 160 | Pyth |
| [External Code] | |
| python.exe/_tmainCRTStartup() Line 552 | C |
| [External Code] | |



Demo - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Architecture Test Web Essentials R Tools Analyze Window Help

Quick Launch (Ctrl+Q)

Mikhail Arkhipov MA

Debug Any CPU Source startup file tdoev

plots.R markdown.rmd script.R R Package Manager

Available Installed Loaded Search

| Package Name | Version | Status |
|--|-----------------------|--------|
| A3 Accurate, Adaptable, and Accessible Error Metrics for Predi | v1.0.0 | ✗ |
| abc Tools for Approximate Bayesian Computation (ABC) | v2.1 | ✗ |
| abc.data Data Only: Tools for Approximate Bayesian Computation (ABC) | v1.0 | ✗ |
| assertthat Easy pre and post assertions. | v0.1 | ✗ |
| base The R Base Package | v3.2.2 | |
| bdsmatrix Routines for Block Diagonal Symmetric matrices | v1.3-2 | ✗ |
| BH Boost C++ Header Files | v1.60.0-1 ✗ v1.60.0-2 | ⬆ |
| bit A class for vectors of 1-bit booleans | v1.1-12 | ✗ |
| bitops Bitwise Operations | v1.0-6 | ✗ |

A3

Installed version: 1.0.0 Uninstall

Latest version: 1.0.0

Title: Accurate, Adaptable, and Accessible Error Metrics for Predictive Models

Description: Supplies tools for tabulating and analyzing the results of predictive models. The methods employed are applicable to virtually any predictive model and make comparisons between different methodologies straightforward.

Depends: R (>= 2.15.0), xtable, pbapply

Suggests: randomForest, e1071

License: GPL (>= 2)

Library: C:/Users/mikhaila/Documents/R/win-library/3.2

Repository: <https://cloud.r-project.org/src/contrib>

Authors: Scott Fortmann-Roe

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'Demo' (1 project)

- .gitignore
 - .RHistory
 - airports.dat
 - Demo.rproj
 - markdown.rmd
 - plots.R
 - routes.dat
 - script.R
 - server.R
 - ui.R

R Interactive

Attach Debugger C:/Demo

```
Type 'q()' to quit R.

Microsoft R Open 3.2.2
The enhanced R distribution from Microsoft
Microsoft packages Copyright (C) 2016 Microsoft Corporation
```

110 %

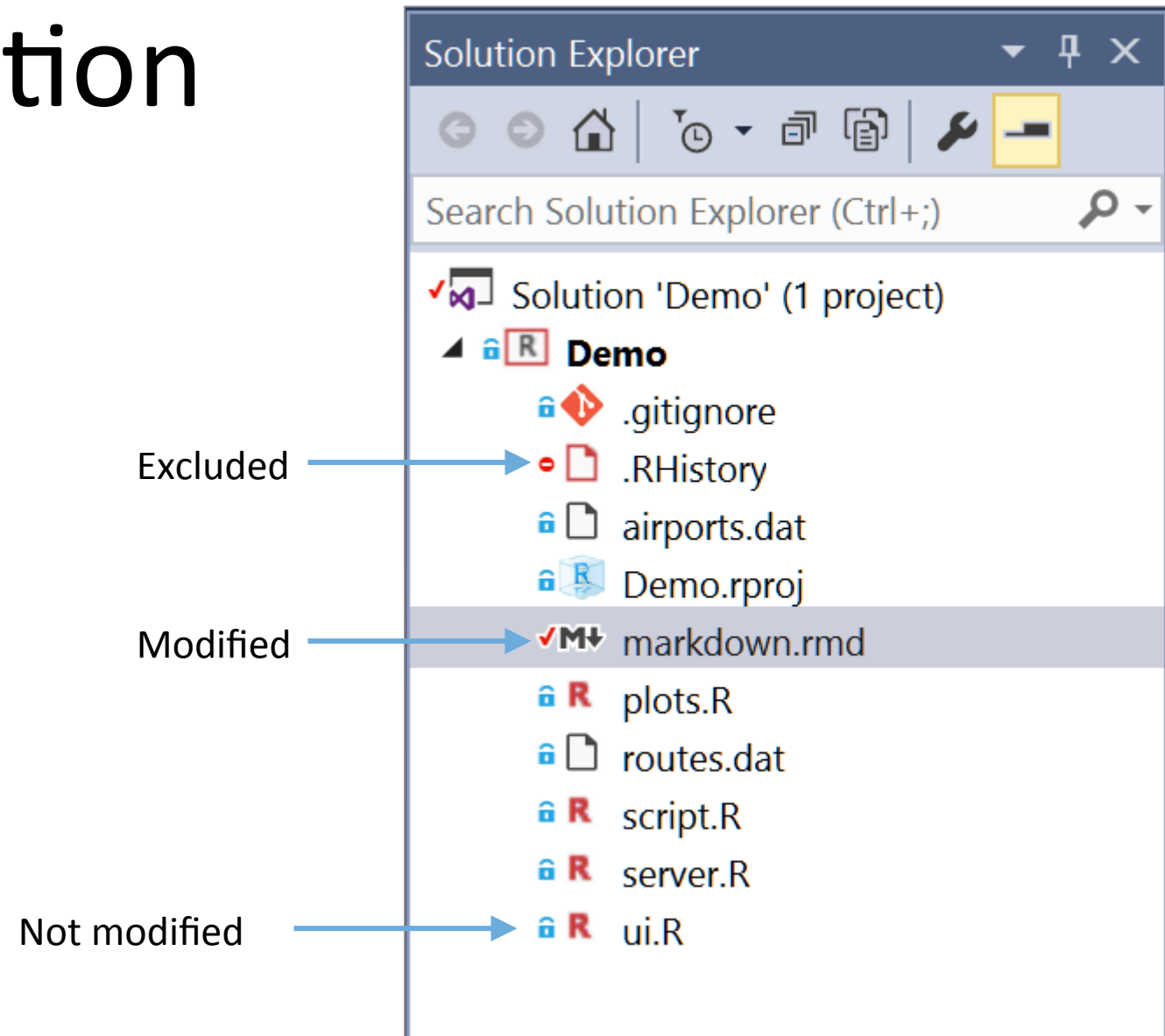
Error List Exception Settings R Interactive Output Find Results 1 Find Results 2 Find Symbol Results

Team Explorer Solution Explorer

Ready

0 2 Demo master

Git integration



SQL Database Project Support

The screenshot shows the 'Add New Item - Database' dialog in Visual Studio. The 'Installed' tab is active, displaying a list of templates under the 'SQL Server' category. The 'R Script' template is selected, and its details are shown in the right pane. The 'Name' field at the bottom contains 'Script1.R'. The Solution Explorer on the right shows a project named 'Demo' with a 'Database' folder containing several files, including 'Script1.R'.

Add New Item - Database

Sort by: Default

Search Installed Templates (Ctrl+E)

| Icon | Item Name | Category |
|------|-------------------------|------------|
| | R Script | SQL Server |
| | Stored Procedure with R | SQL Server |

Type: SQL Server

R script is a text file containing same commands that can be entered on the command line of R

[Click here to go online and find templates.](#)

Name: Script1.R

Add Cancel

Solution Explorer

Search Solution Explorer (Ctrl+;)

Solution 'Demo' (2 projects)

- Database
 - Properties
 - References
- Demo**
 - .gitignore
 - .RHistory
 - airports.dat
 - Demo.rproj
 - markdown.rmd
 - plots.R
 - routes.dat
 - script.R
 - server.R
 - ui.R

Visual Studio Platform

Core UI Services

Core Editor

Project System

Command Chain

Debugger

Test Framework

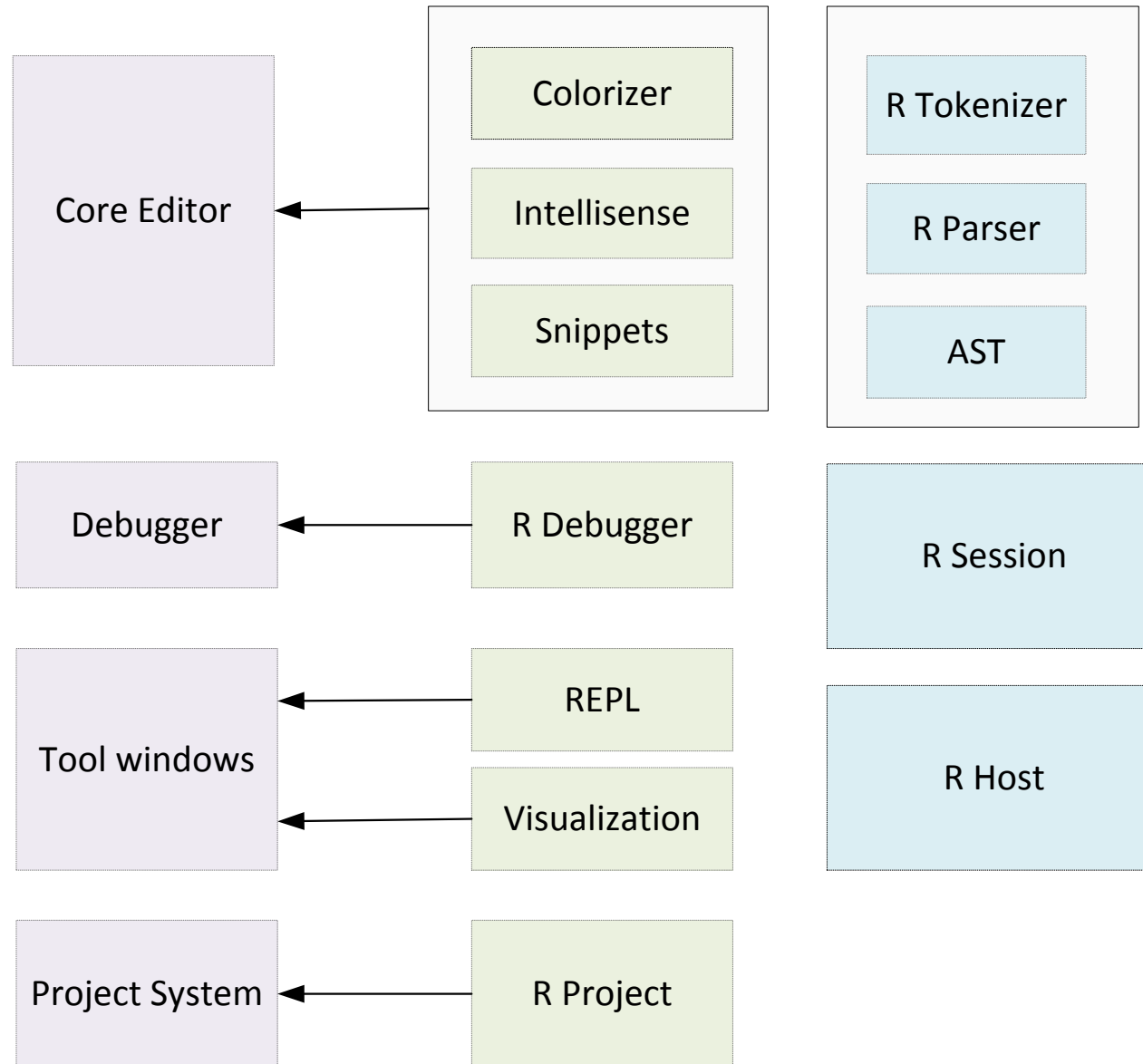
Data Tools

Profiler

Source Code
Control

Visual Studio Core

R Tools



Microsoft Visual Studio interface showing a demo of R markdown rendering. The main editor displays the source R markdown code, and the preview pane shows the rendered HTML output.

Source Code (Left Pane):

```
---
title: "Airports in the United States"
output: html document
---

Let's load a list of airport data from https://github.com.

```{r}
airports <- read.csv("airports.dat", header = FALSE)
colnames(airports) <- c("ID", "name", "city", "country", "IATA_FAA", "IATA_ICAO")
```

This data set contains airports from all over the world. Let's get only the airports from the United States.

```{r, message=FALSE, warning=FALSE}
library(dplyr)
usa_airports <- airports %>% filter(country == "United States")

library(DT)
datatable(usa_airports[,c("name", "city", "country", "IATA_FAA", "IATA_ICAO")])
```
```

Rendered Output (Right Pane):

```
title: "Airports in the United States"
output: html document

Let's load a list of airport data from https://github.com/jpatokal/openflights

airports <- read.csv("airports.dat", header = FALSE)
colnames(airports) <- c("ID", "name", "city", "country", "IATA_FAA", "IATA_ICAO")

This data set contains airports from all over the world. Let's get only the airports from the United States.

library(dplyr)
usa_airports <- airports %>% filter(country == "United States")

library(DT)
```

R Interactive Console (Bottom):

```
Microsoft R Open 3.2.2
The enhanced R distribution from Microsoft
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```

Solution Explorer (Right):

- Solution 'Demo' (2 projects)
 - Database
 - Properties
 - References
 - Demo
 - .gitignore
 - .RHistory
 - airports.dat
 - Demo.rproj
 - markdown.rmd
 - plots.R
 - routes.dat
 - script.R
 - server.R
 - ui.R

Demo - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Architecture Test Web Essentials R Tools Analyze Window Help

Debug Any CPU Source startup file

plots.R markdown.rmd script.R R Package Manager

```
---
title: "Airports in the United States"
output: html document
---

Let's load a list of airport data from https://github.com/jpatokal/open

```
```{r}
airports <- read.csv("airports.dat", header = FALSE)
colnames(airports) <- c("ID", "name", "city", "country", "IATA_FAA", "IATA_ICAO")
```
```



This data set contains airports from all over the world. Let's get airports from the United States.



```
```{r, message=FALSE, warning=FALSE}
library(dplyr)
usa_airports <- airports %>% filter(country == "United States")

library(DT)
datatable(usa_airports[,c("name", "city", "country", "IATA_FAA", "lat", "lon")])
```
```


```

title: "Airports in the United States"

output: html document

Let's load a list of airport data from <https://github.com/jpatokal/open>

```
airports <- read.csv("airports.dat", header = FALSE)
colnames(airports) <- c("ID", "name", "city", "country", "IATA_FAA", "IATA_ICAO")
```

This data set **contains** airports from all over the world. Let's get airports from the United States.

```
library(dplyr)
usa_airports <- airports %>% filter(country == "United States")

library(DT)
datatable(usa_airports[,c("name", "city", "country", "IATA_FAA", "lat", "lon")])
```

Stack Overflow (40)

- Q: ^ symbol in R lm() (Running a regression in R: fit = lm(y ~ x + log(x) + z...)
- Q: Understanding lm and environment (Could you help me explain the foll...)
- Q: R: extracting lm() attributes (I want to extract the fstatistic value from su...)
- Q: lm() called within mutate() (I wonder if it is possible to use lm() within m...)
- Q: Incorrect estimates of lm alternatives (Dirk Eddelbuettel provides alterna...)
- Q: equation for lm graphics (I'm doing graphics with lm relation, and I wan...)
- Q: lm() linear model - attributes (So I get a bit confused by the lm()-comma...)
- Q: Replace lm coefficients in [r] (Is it possible to replace coefficients in lm o...)
- Q: LM algorithm using EJML (model parameters. For example: a*x^2+b*x+...)
- Q: Sphinx 4 corrupted ARPA LM? (I have an ARPA LM generated by kylm,...
- Q: Use and save lm summary for multiple lm fitting ("TR9.1", "TR10.1", "T...)
- Q: applying lm to multiple datasets (Below are 4 datasets (I've just created...)
- Q: R - lm and r squared (am exporting a m by n binary matrix from Java to...)
- Q: Closure and lm in R (Hi i tried to prepare a little demo code for closures...)
- Q: unserialize lm object in R (I have a file with file with 1 string following by...)
- Q: Elasticity function for lm() coefficient (I wonder whether there is a functi...)
- Q: Updating data in lm() calls (Is there is an equivalent to update for the da...)
- Q: When to use 'y ~ .' with 'lm()' (I this link they show how to use lm() with...)
- Q: Extracting dependent variable from lm object (Is there a function to extr...)
- Q: Covariance Matrix lm object R (This should be really easy, but is there a...)
- Q: Different fit comparing lm() and lmList(). Why? (86 43.42 3 I want to do...)

Press Ctrl+Q to show all results.

110 % John Lam, 58 days ago | 1 author, 2 changes

R Interactive

Attach Debugger C:/Demo

Type 'q()' to quit R.

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Error List Exception Settings R Interactive Output Find Results 1 Find Results 2 Find Symbol Results

Ready In 1 Col 1 Ch 1 INS 0 2 Demo master