

## Record of Installation Wolfram Language on M1 Macbook Pro

From <https://www.wolfram.com/engine/> downloaded macOS ARM version of free Wolfram Engine for Developers

Registered for account and licence

Installed Wolfram app from Downloads to /Applications by running downloaded dmg

In the p396 environment set up in ID 41:

git clone <https://github.com/WolframResearch/WolframLanguageForJupyter.git>

```
wolframscript -config WOLFRAMSCRIPT_KERNELPATH="/Applications/Wolfram Engine.app/Contents/MacOS/WolframKernel"
```

```
wolframscript -activate YOURREGISTEREDEMAIL
```

```
./configure-jupyter.wls add
```

In terminal or add to .zshrc

```
export WOLFRAMSCRIPT_KERNELPATH=/Applications/Mathematica.app/MacOS/WolframKernel
```

Run jupyter-lab

The screenshot shows a JupyterLab notebook with the following content:

```
[1]: %load_ext watermark
%watermark
%watermark --iversions
Last updated: 2021-09-02T06:56:20.605325+01:00
Python implementation: CPython
Python version       : 3.9.6
IPython version      : 7.26.0
Compiler             : Clang 11.1.0
OS                   : Darwin
Release              : 20.0.0
Machine              : arm64
Processor            : arm
CPU cores            : 8
Architecture         : 64bit
```

[2]:

$$-\frac{1}{6}\log(x^2-x+1) + \frac{1}{3}\log(x+1) + \frac{\tan^{-1}\left(\frac{2x-1}{\sqrt{3}}\right)}{\sqrt{3}}$$

[3]:

```
fun:=Sin[Sqrt[x^2+y^2]]/Sqrt[x^2+y^2]
Plot3D[fun, {x, -5+Pi, 5+Pi}, {y, -5+Pi, 5+Pi},
PlotPoints -> 100, BoxRatios -> {1, 1, 0.2},
PlotRange -> All]
```

[4]:

[5]:

```
pvf1 = StreamPlot[{1, y (1 - y)}, {t, 0, 5}, {y, 0, 5/2},
  Axes -> Automatic, AxesOrigin -> {0, 0}, Frame -> False,
  AxesLabel -> {t, y}];
pvf2 = VectorPlot[{1, y (1 - y)}, {t, 0, 5}, {y, 0, 5/2},
  Axes -> Automatic, AxesOrigin -> {0, 0}, Frame -> False,
  AxesLabel -> {t, y}];
Show[GraphicsRow[{pvf1, pvf2}]]
```

The output shows two side-by-side plots. The left plot is a StreamPlot showing streamlines of the vector field {1, y(1-y)} in the t-y plane. The right plot is a VectorPlot showing the same vector field with arrows. Both plots have t on the horizontal axis (0 to 5) and y on the vertical axis (0 to 5/2).