MEN FROM MARS
WOMEN FROM VENUS
BOTH CAN CODE .NET IN JUPYTER

Ron Dagdag

STORY

Ron

- .NET Developer since 2005
- .NET Framework 2.0
- Uses .NET for AR and IoT applications
- .NET Core
- Startup - Brand new software

Leodette

- .NET Developer since 2003
- .NET Framework 1.0
- Maintain large enterprise applications
- .NET Framework
- Software that makes money

STORY

We both live in the same .NET Solar System in two different worlds

Then, we kept hearing there's another world out there

Jupyter and Data Science

Pythonistas

PYTHONISTA

AGENDA

- ❓ What is Jupyter?
- 🖥 .NET Interactive
- 💻 .NET Jupyter Notebooks
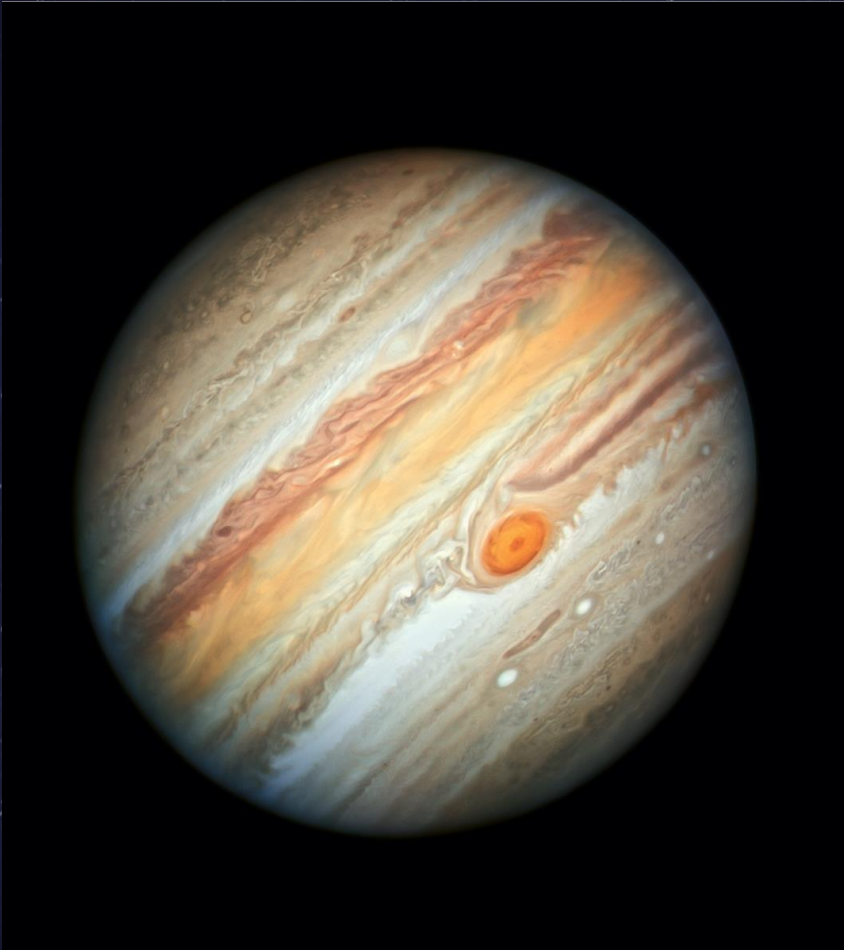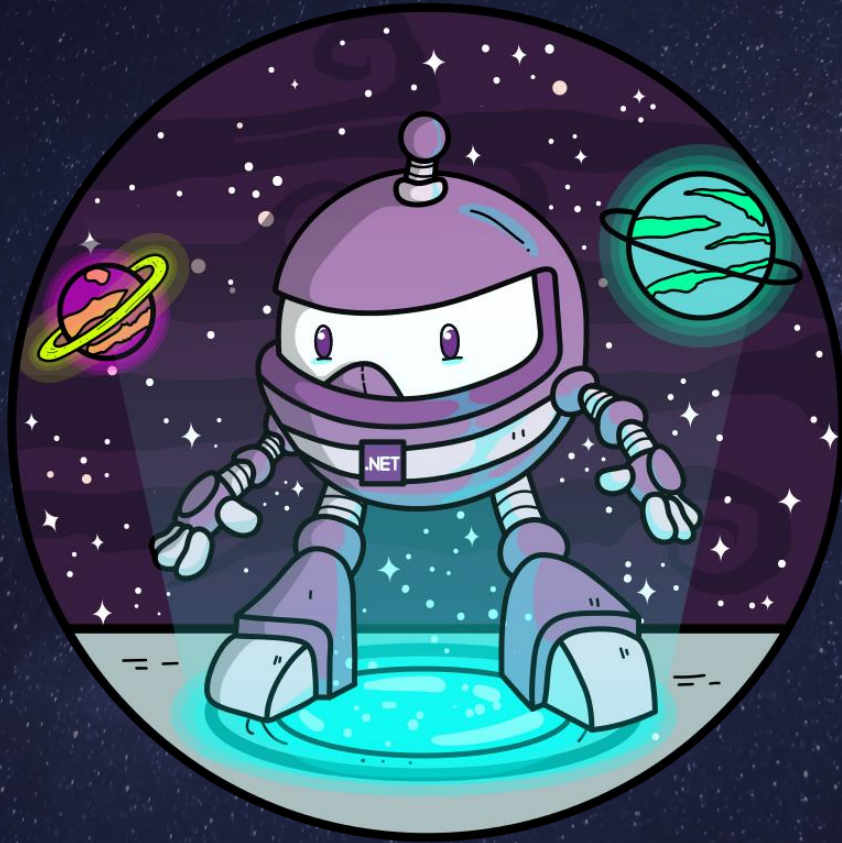- 🍩 Raspberry PI
- ▶ Demo

JUPYTER

- open-source web application since 2015
- create and share documents that contain
  - Live code
  - Equations
  - Visualizations
  - Narrative text.
- interactive data science & scientific computing
- Julia, Python and R
- (IPython Notebooks)

.NET INTERACTIVE

.NET into interactive experiences

- Jupyter, nteract, Visual Studio Code

Share code, explore data, write, and learn across your apps

.NET IN JUPYTER NOTEBOOKS

- Kernels
  - Python, R
  - .NET (C#), .NET (F#)
  - Powershell
- Magic Commands
  - #!lsmagic
- PocketView
  - Display HTML
- Xplot (data visualization library)
  - Prints text, html, svg, charts

AZURE DATA STUDIO

- **Jupyter Notebooks**
- **Use .NET Interactive Kernel**
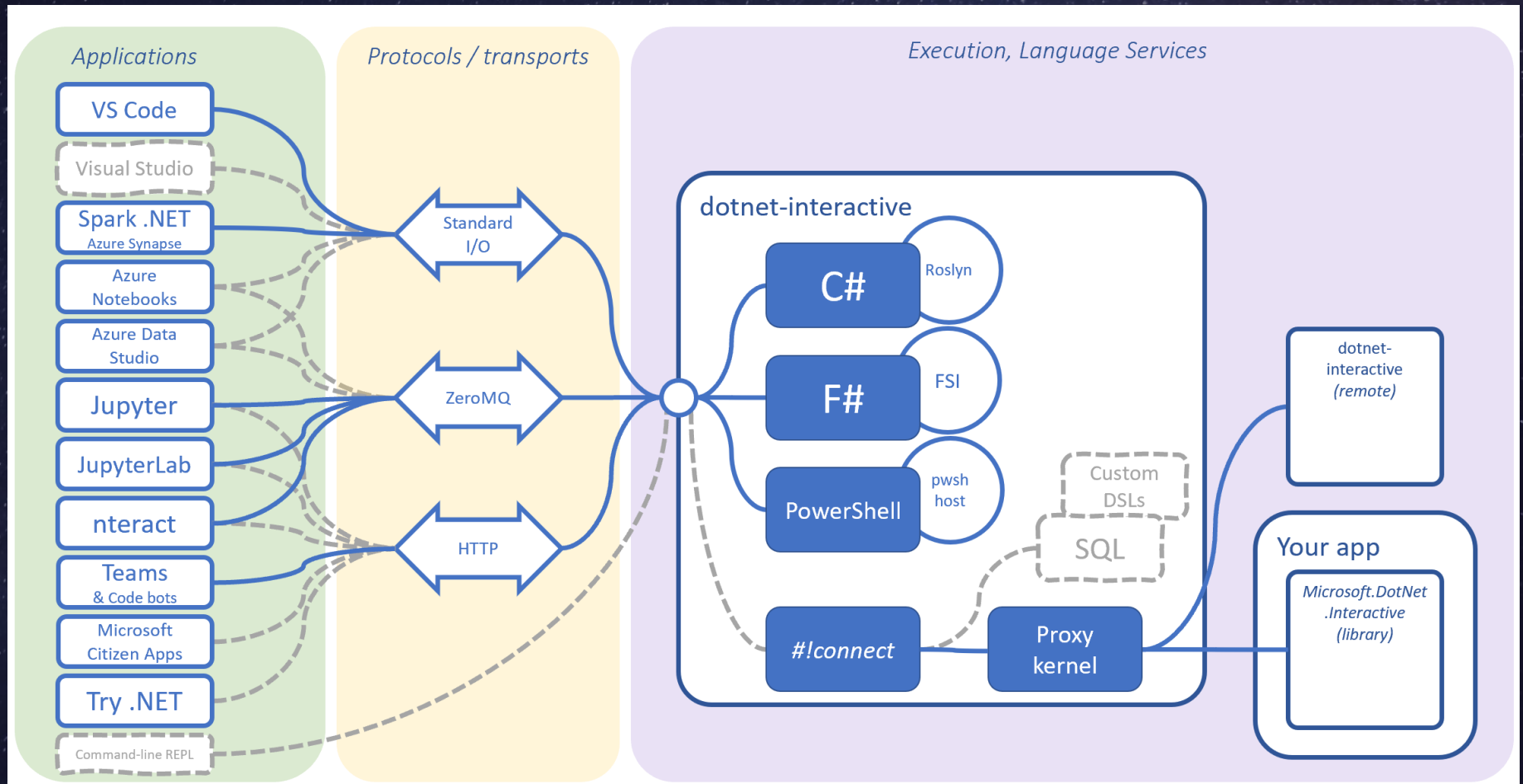 - **Powershell**
  - **C#**
  - **F#**

VISUAL STUDIO CODE

- **Jupyter Notebooks**
- **.NET Interactive Notebooks extension**
- **Convert existing Jupyter notebook to a .NET Interactive Notebook**
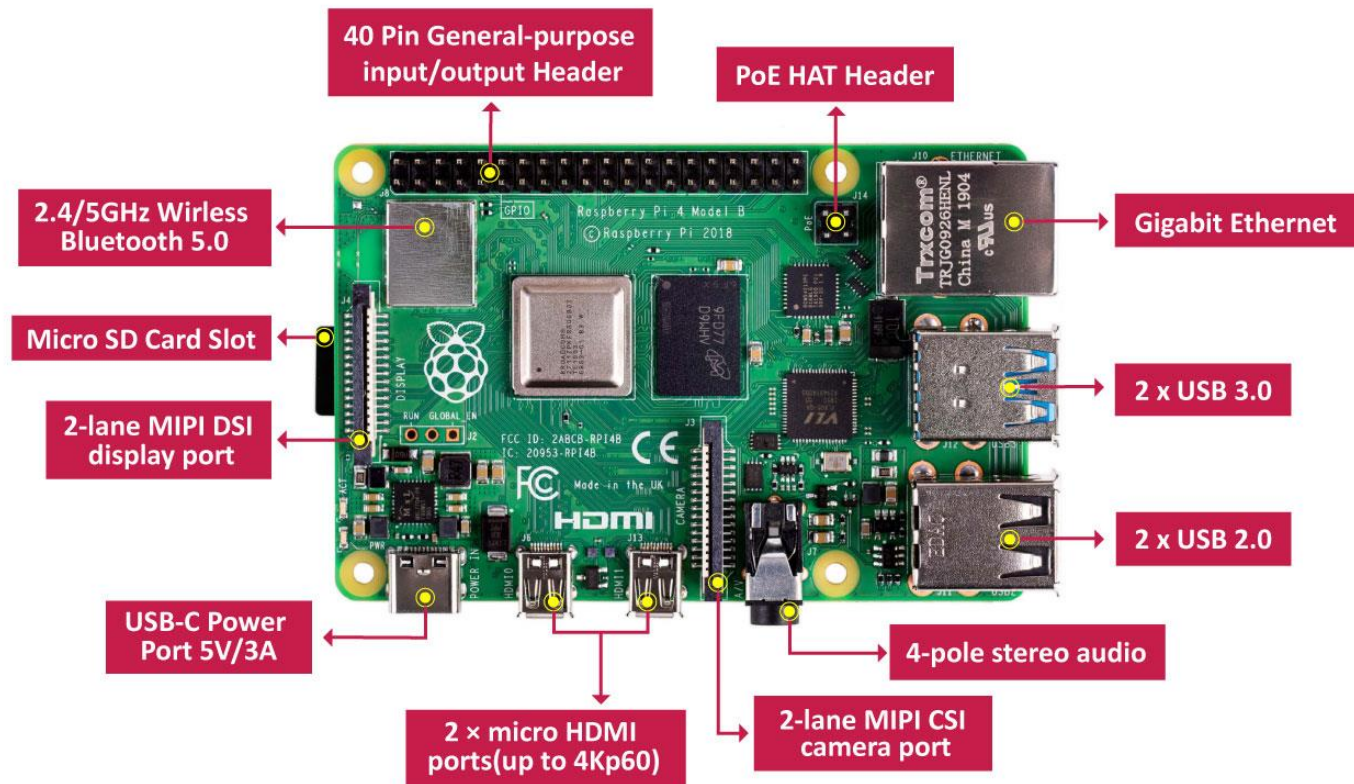- **File extension: *.dib**

.NET INTERACTIVE

RASPBERRY PI

40 Pin General-purpose input/output Header

PoE HAT Header

2.4/5GHz Wirless Bluetooth 5.0

Gigabit Ethernet

Micro SD Card Slot

2-lane MIPI DSI display port

2 x USB 3.0

2 x USB 2.0

USB-C Power Port 5V/3A

4-pole stereo audio

2 × micro HDMI ports(up to 4Kp60)

2-lane MIPI CSI camera port

SENSE HAT

RASPBERRY PI

To install in raspberry pi

```
curl -L https://raw.githubusercontent.com/colombod/pi-top/master/setup-device.sh | bash -e
source .jupyter_venv/bin/activate
jupyter lab --no-browser
```

Rasperry Pi Sense Hat installation instructions https://www.raspberrypi.org/documentation/hardware/sense-hat/

PRESENTATION MATERIALS

https://github.com/rondagdag/dotnetcode-jupyter-talk

ABOUT ME
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- Feedback appreciated, help improve my presentation skills