

# Python Bootcamp Toolboxes

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Resident Astronomer at SOAR Telescope
https://github.com/b1quint/PythonBootcamp2017



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#### **Tab Completion**

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#### **Tab Completion**

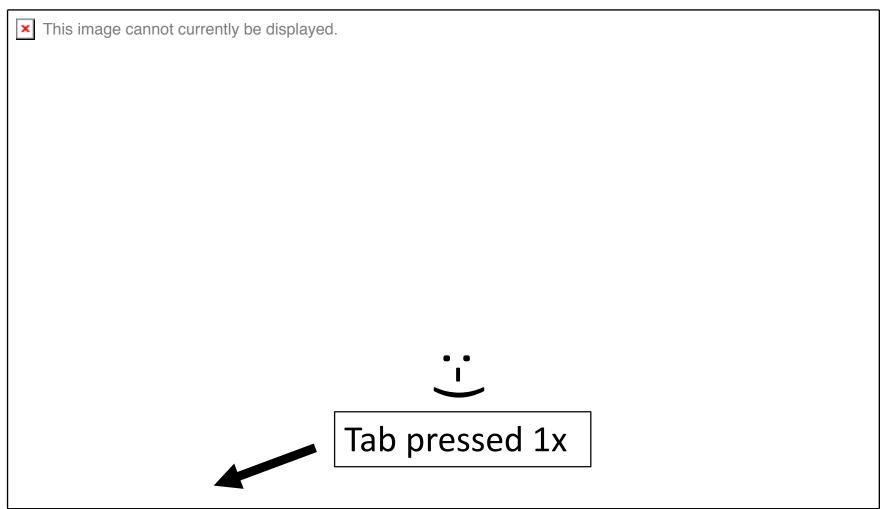


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#### **Tab Completion**

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#### **Tab Completion**

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#### Help with (i)Python

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#### Help with Python



Help with iPython



#### Help with iPython

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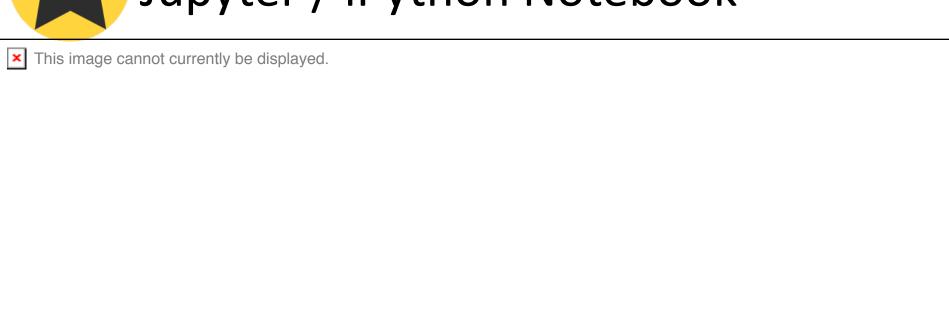


#### **Magic Functions**

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<ENTER>: New line

<SHIFT> + <ENTER>: Execute cell







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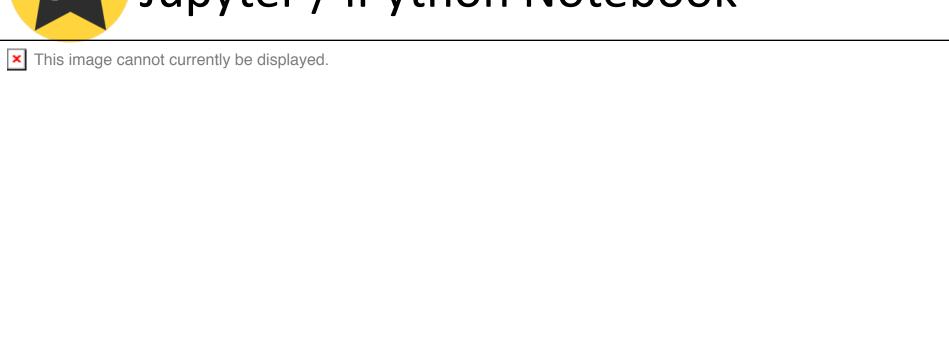
**Command Mode** 



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**Edit Mode** 









<m> in \_command mode\_: swicth to Markdown edition













## Jupyter / iPython Notebook



### Jupyter / iPython Notebook



### Jupyter / iPython Notebook



## PyCharm – Not Used



### PyCharm – Tab





### PyCharm – See parameters





## PyCharm – Auto-complete



### PyCharm – Auto-complete

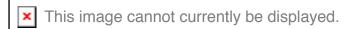


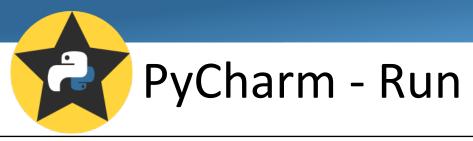


### PyCharm – Quick Help



### PyCharm – Quick Help





# PyCharm - Debug

# PyCharm – PEP-8

# PyCharm – PEP-8



#### PyCharm - Structure

```
bouncing_ball.py - PyCharm_Examples - [~/GitHub/PBC2017_IAG_Material/PyCharm_Examples]
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PyCharm_Examples bouncing_ball.py
  1 Project ▼ 🕀 🛊 | 🕸 - 🎼
                      bouncing_ball.py x
   PyCharm_Examples ~
                                11 11 11
                        8
      bouncing_ball.py
                                import matplotlib.pyplot as plt
      main_file.py
      my_methods.py
                                import matplotlib.animation as pani
                       10
Structure
   III External Libraries
                       11
                                import numpy as np
ö
                       12
                       13
                                def main():
                       14
                       15
                       16
                                     my_particle_1 = Particle(0.1, 0.001)
                       17
                                     my particle 2 = Particle(0.2, 0.0025)
                       18
                                     my_box = Box()
                       19
2: Favorites
                                     my_box.add_particle(my_particle_1)
                       20
                                     my_box.add_particle(my_particle_2)
                       21
  6: TODO
           9: Version Control
                         Pvthon Console

    Event Log

                                     Terminal
                                                             14:12 LF UTF-8 Git: bquint-updates + 🚡 🖨
```



#### PyCharm - Structure

```
bouncing_ball.py - PyCharm_Examples - [~/GitHub/PBC2017_IAG_Material/PyCharm_Examples]
🗅 🗒 Ø ♦ 👉 🥕 Ж 🛅 🐧 🔍 🚓 💠 👘 bouncing_ball 🔻 🕨 💥 💯 😘 🔠 👺 🛨 🐓 🥐
PyCharm_Examples > is bouncing_ball.py
                          bouncing_ball.py ×
     Y 6  🛬 🕹
                                     11 11 11
     bouncing_ball.py
                                     import matplotlib.pyplot as plt

▼ f main()

                                     import matplotlib.animation as pani
        update(frame_number

▼ C Box
                            11
                                     import numpy as np
        init (self)
        m add_particle(self, part
                            12
        m one interaction(self)
                            13
        f limits
                                     def main():
                            14
        f list of particles
        f n_particles
                            15
        f __class__
                                           my_particle_1 = Particle(0.1, 0.001
                            16
        f dict
        f doc
                                           my particle 2 = Particle(0.2, 0.002)
                            17
        module module
      Particle
                           18
        __init__(self, x0, v0)
                                           my box = Box()
                           19
        m str (self)
2: Favorites
        m change_direction(self)
                                           my_box.add_particle(my_particle_1)
                           20
        m update(self)
                                           my_box.add_particle(my_particle_2)
                            21
        f v
        f x
            9: Version Control
                           Rython Console
                                        Terminal

    Event Log

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