



Welcome to the Riot API Bootcamp!

KNOW MORE, WIN MORE.



LEAGUE OF
LEGENDS
WILDRIFT

LEGENDS OF
RUNETERRA



WHAT IS THE PURPOSE OF THIS COURSE?

Learning to use the Riot API is a bit of a struggle. There's very few resources out there and they're not very structured.

"The Riot API Bootcamp Course is designed to take you from no knowledge up to building your own app."



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WHO AM I?

Karl, Rocket Scientist & Data Analyst

Past work and collaborations:

- NASA
- Wells Fargo
- Mozilla
- Lockheed Martin
- Air Force Research Lab
- Siemens, GSK

Experience in everything from AI/ML to jet engine design

“Solve difficult problems with novel methods, by any means necessary”

RIOT API BOOTCAMP SYLLABUS

1. Basics (Python, GitHub, Notepad++)

1. Resources to get started
2. Setting up an environment
3. Downloading GitHub repos
4. JSON explanation & Notepad++ example
5. *Project: read csv file, convert to data frame, create graphs*

2. Riot API introduction

1. What is an API?
2. Getting access & Registering your App
3. What end points are there/what data is available?
4. Explanation of puuid/account name
5. *Project: make an API call on the website & download the data*

3. Automating API interactions

1. Introduction to libraries (Cassiopeia, Riot Watcher)
2. Getting help (documentation, Discord)
3. *Project: automate an API call using a library*

4. Single Endpoint Data

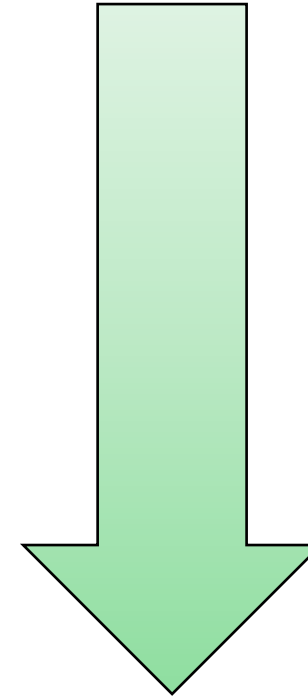
1. Use case explanation (e.g., in-depth match analysis, leaderboards)
2. Code example- getting challenger leaderboard
3. *Project: request last 25 games for an account and determine the most common champion(s)*

5. Large Scale Data Collection

1. Use case explanation (e.g., match history of top 50 players)
2. Setting up a process pipeline
3. Comparing 1 file approach vs. functions across files approach
4. *Project: determine number of roles (TOP, MID, etc) on the challenger ladder using the last 5 games*

5 Modules covering core topics

Project at the end of each



Module 1: Basics

RIOT API BOOTCAMP

Slide Deck



MODULE 1: BASICS

1. Basics (Python, GitHub, Notepad++)

1. Resources to get started
2. Setting up an environment
3. Downloading GitHub repos
4. JSON explanation & Notepad++ example
5. *Project: read csv file, convert to data frame, create graphs*

LET'S DIVE IN

RESOURCES TO GET STARTED

Python (Programming Language)

- **Python is a programming language**
 - A way of translating language into computer code
 - Free, distributed by the Python Foundation:
<https://www.python.org/about/gettingstarted/>
- **This is not a Python course**
 - I expect you know basic programming concepts
 - Example: I will explain what a for loop does, but not the syntax behind it
- **There are plenty of Python guides out there!**
 - Better explainers than I can make
 - Python Foundation even has a getting started guide:
<https://wiki.python.org/moin/BeginnersGuide>



These are not the only programs out there- only what I use!

Just about everything is free & open source, so there is a lot of help on the internet (check Stack Overflow!)

Applications

- **Anaconda Navigator**
 - Python IDE + package manager
 - Download at: <https://www.anaconda.com/products/individual>
 - Guide: <https://docs.anaconda.com/anaconda/navigator/index.html>
- **GitHub**
 - Version control and collaborative coding
 - Web version at <https://github.com/>
 - Download the desktop app: <https://desktop.github.com/>
 - Guide to getting started: <https://www.freecodecamp.org/news/the-beginners-guide-to-git-github/>
- **Notepad++**
 - Text editor, useful for reading data files
 - Download at: <https://notepad-plus-plus.org/>
 - Very useful plug-in, "JS Tool"
<https://www.sunjw.us/jstool/npp/>



ANACONDA NAVIGATOR VIDEO

Walkthrough of features

- Spyder
- Making an environment
- Package Manager
- Anaconda prompt



GITHUB DESKTOP VIDEO

Walkthrough of features

- Downloading
- Cloning a Repo
- Pushing a commit



NOTEPAD++ VIDEO

Walkthrough of features

- Programming Language selection
- Adding Plug-ins
- JSON example



FIRST STEPS

Let's build our first Python script!

Goal: familiarity with Python, Spyder IDE, Pandas package

1. Open the Python IDE

- Open Anaconda Navigator
- Click Spyder

2. Update the file information

- Purpose of the file & last update
- Save the file!

3. Import Pandas

- `import pandas`
- https://pandas.pydata.org/docs/getting_started/index.html

4. Create a data set

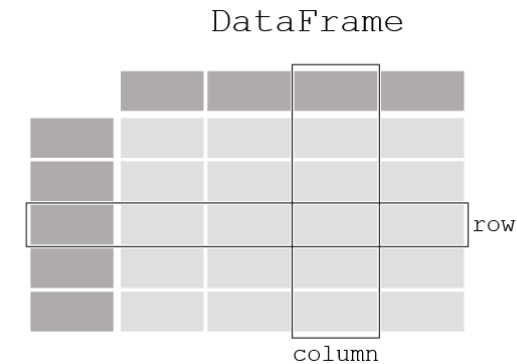
- Open Excel and create your own (be sure to save!)
- Find an already existing file

5. Load the data in Python

- Don't know how? Always check Stack Overflow or documentation
- https://pandas.pydata.org/pandas-docs/stable/reference/api/pandas.read_excel.html

6. Play around with the data

- Try deleting a column
- What about adding a column?



More info:

https://pandas.pydata.org/docs/getting_started/intro_tutorials/index.html

FIRST STEPS CONTINUED

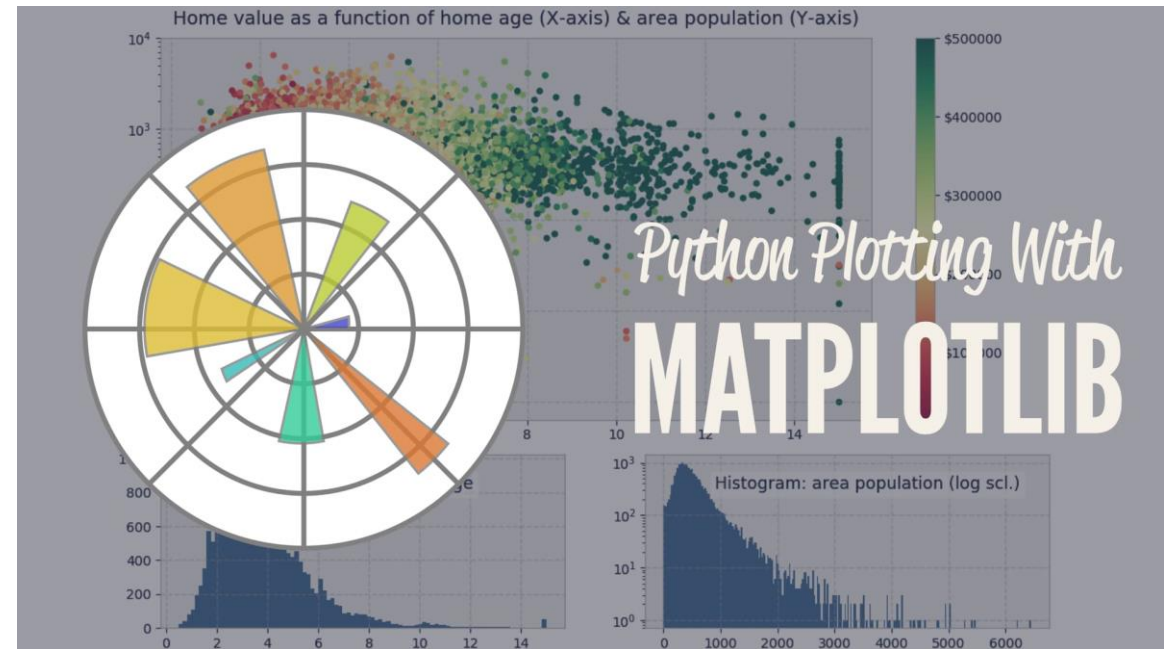
There's a package for basically everything!

- Statistical analysis
- Graphing
- Graphical interfaces, etc.

Example for graphing: Matplotlib

- <https://matplotlib.org/>
- Create everything from bar graphs to heat maps

Try looking up something that interests you and see if there's a Python package for it!



QUESTIONS?

Contact me



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It is my hope that this course is easy to understand and follow

Have a question or want additional details?
Just reach out!

If you want to know more about my work (LoL Genius) or have questions about something you're building, LMK!