Welcome to the Riot API Bootcamp!

KNOW MORE, WIN MORE.

RIOT API BOOTCAMP SYLLABUS

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

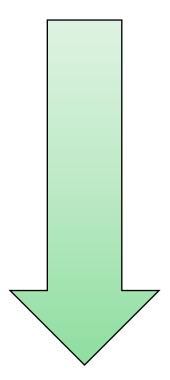
4. Single Endpoint Data

- 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 5: Large Scale Data Collection

RIOT API BOOTCAMP

Slide Deck



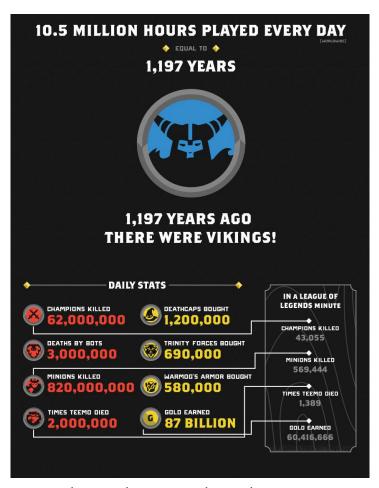
MODULE 5: LARGE SCALE DATA COLLECTION

5. Single Endpoint Data

- 1. Use case explanation
- 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

ET'S DIVE IN

WHAT IS LARGE SCALE DATA COLLECTION?



This is what Riot released in 2016. League now has ~180 million monthly players, more than 10x the above info

Previously we looked at small data

- 1 account
- 1-2 end points

What if we wanted to get an idea of large trends?

- What champions are popular?
- How are different roles represented in different ranks?
- Is there a new build?

This is a lot of data!

Just how big is this?

- 2020 World Championship peaked at 46,067,896 viewers
- Getting the last 20 games for these players is 921 million games
- 1 match stat file takes up about 115 KB, storing the game data would take up 101,000 GB
- If each request takes 0.5 s, that will take 14.6 years

PROCESS PIPELINE

Because we have so much data, we need a clean process to automatically get the information!

Define the relevant data: What data do I want to collect?

- List of players
- List of matches
- Pro matches
- Timeframe

Identify API endpoints: Where is the data coming from?

- Account-V1
- League-V4
- Match-V5
- Etc.

Determine the data flow:

In what order am I collecting the data?

- Account info
- Match history
- Match stats

Check for efficiency improvements:

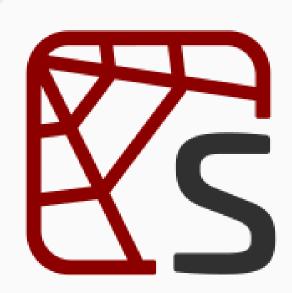
How can I minimize the amount of data requested?

- Info by match instead of player
- Discarding useless info
- Preload static files

MEMORY EFFICIENCY EXAMPLE

/lol/match/v5/matches/{matchId}

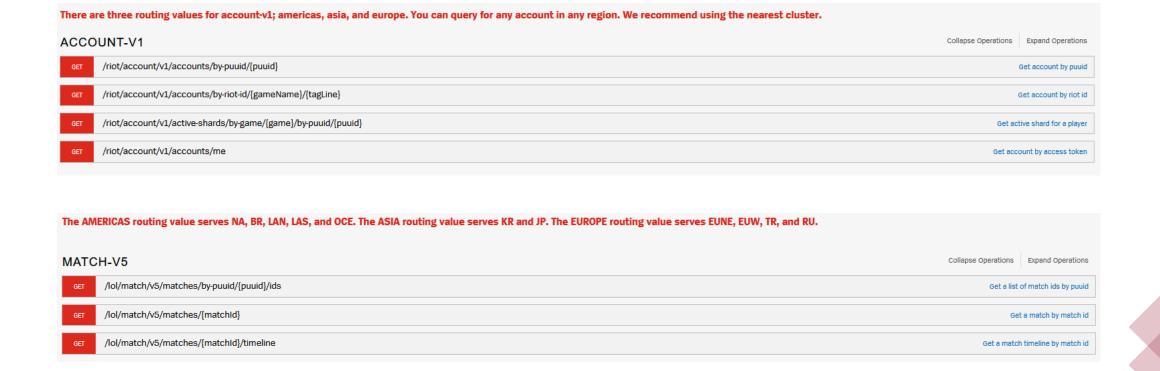
- From Project 4
- Returns MatchDTO object
- Looking at game time



SETTING UP EXTERNAL FUNCTIONS

- Request account info
- Request match history
- Request match info for each match

- /riot/account/v1/accounts/by-riot-id/{gameName}/{tagLine}
- /lol/match/v5/matches/by-puuid/{puuid}/ids
- /lol/match/v5/matches/{matchId}





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!