



# Welcome to the Riot API Bootcamp!

*KNOW MORE, WIN MORE.*

# 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

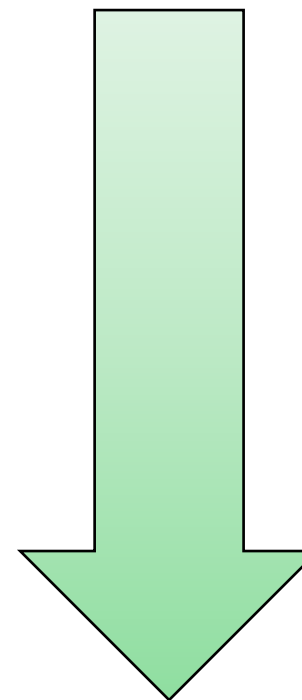
1. Use case explanation (e.g., in-depth match analysis, leaderboards)
2. Code example- getting challenger leaderboard
3. *Project: request last 25 games for an account and determine the most common champion(s)*

## 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 2: Riot API introduction

*RIOT API BOOTCAMP*

Slide Deck





# MODULE 2: INTRODUCTIONS

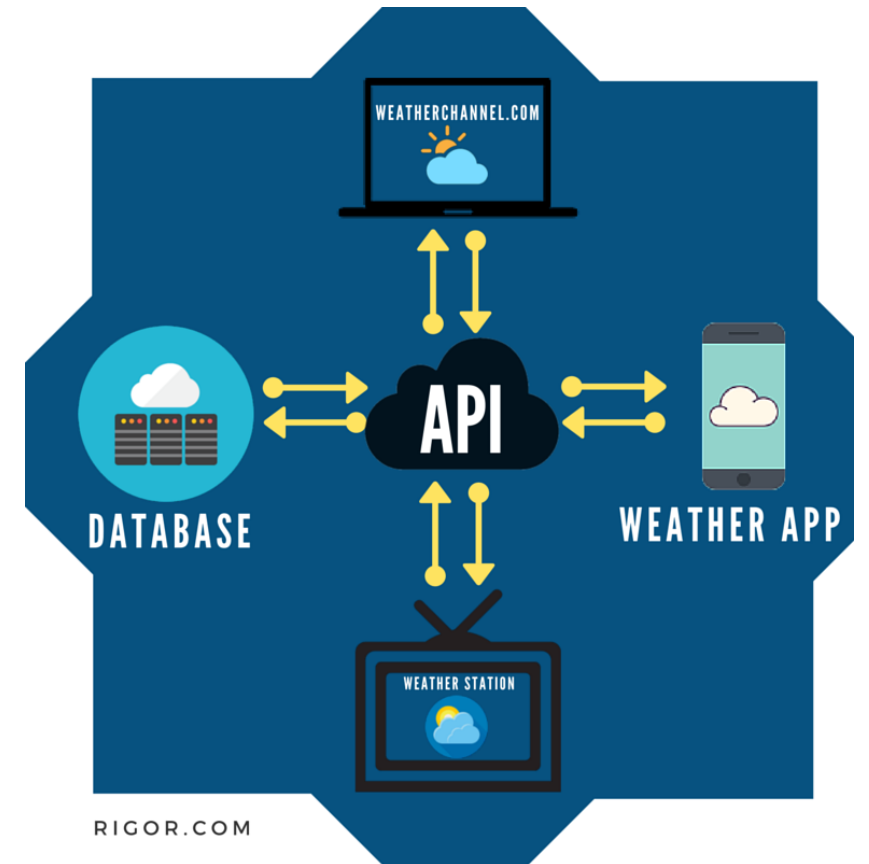
## 2. Riot API introduction

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*

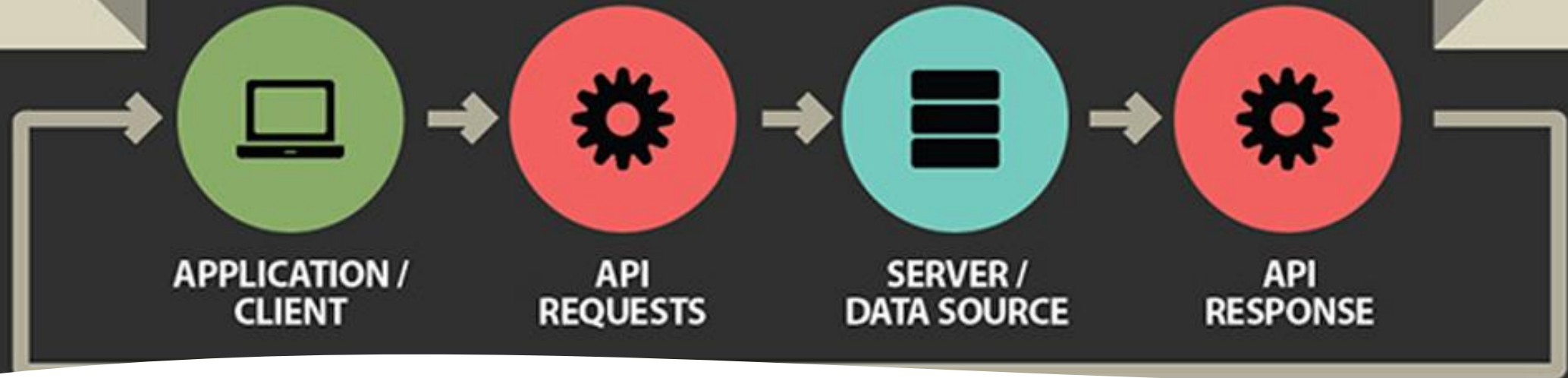
LET'S DIVE IN

# WHAT IS AN API?

- **API= Application Programming Interface**
- Application programming interfaces, or APIs, simplify software development and innovation by enabling applications to exchange data and functionality easily and securely.
- An API, enables companies to open up their applications' data and functionality to external third-party developers, business partners, and internal departments within their companies.
- **Developers don't need to know how an API is implemented; they simply use the interface to communicate with other products and services.**



# How an API works

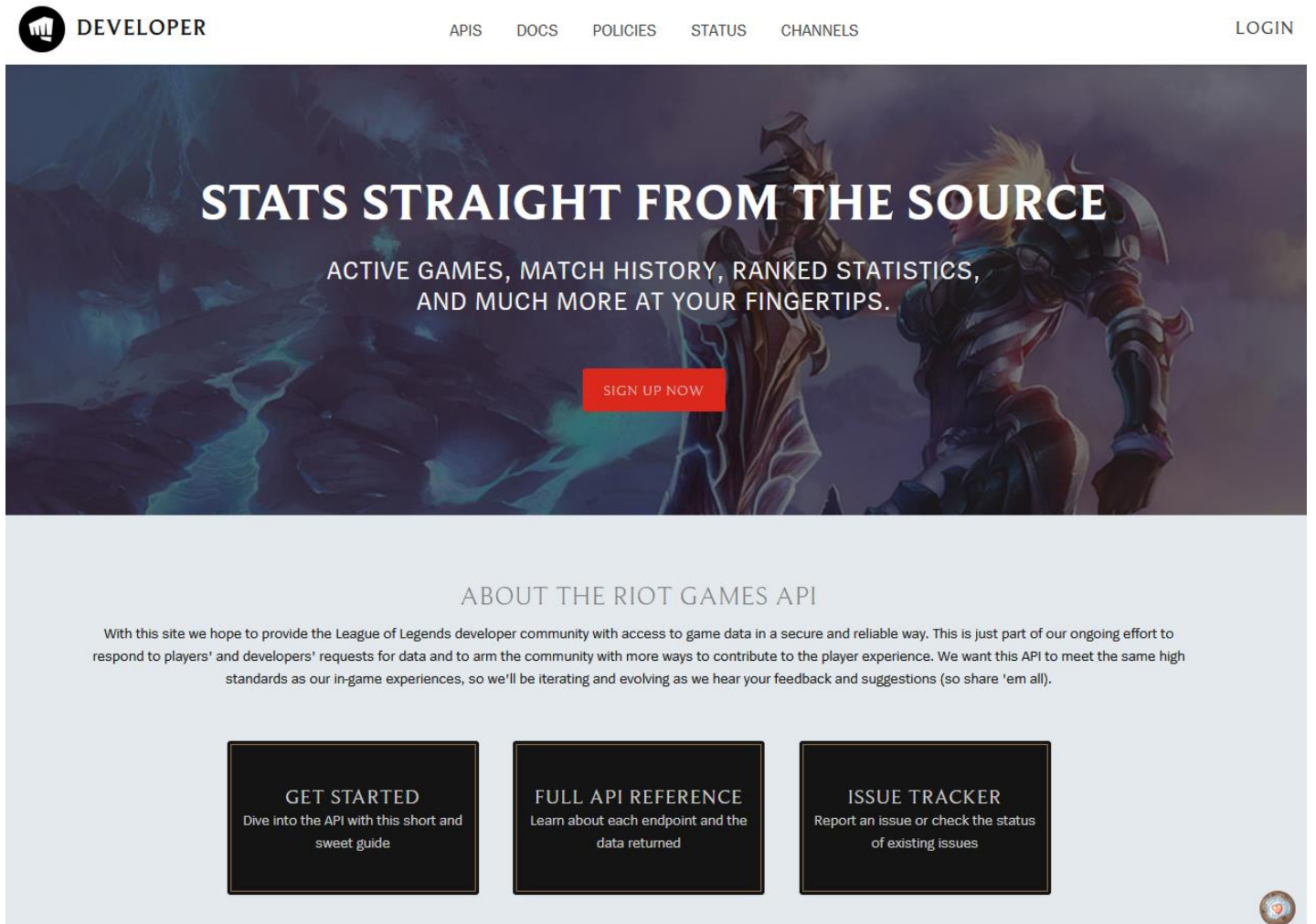


## HOW DOES AN API WORK?

1. **A client application initiates an API call** to retrieve information—also known as a *request*. This request is processed from an application to the web server via the API's Uniform Resource Identifier (URI) and includes a request verb, headers, and sometimes, a request body.
2. **After receiving a valid request**, the API makes a call to the external program or web server.
3. **The server sends a *response*** to the API with the requested information.
4. **The API transfers the data** to the initial requesting application.

# ACCESSING THE RIOT API

<https://developer.riotgames.com/>



The screenshot shows the Riot Games Developer API website. At the top, there is a navigation bar with the Riot Games logo and the word "DEVELOPER" on the left, and links for "APIS", "DOCS", "POLICIES", "STATUS", and "CHANNELS" in the center. On the far right is a "LOGIN" link. The main header features a large, dark image of a League of Legends champion (Yasuo) with the text "STATS STRAIGHT FROM THE SOURCE" in large, white, bold letters. Below this, in smaller white text, it says "ACTIVE GAMES, MATCH HISTORY, RANKED STATISTICS, AND MUCH MORE AT YOUR FINGERTIPS." A red button with the text "SIGN UP NOW" is positioned to the right of this text. Below the header, there is a section titled "ABOUT THE RIOT GAMES API" in a light gray font. Underneath this title is a paragraph of text explaining the purpose of the site: "With this site we hope to provide the League of Legends developer community with access to game data in a secure and reliable way. This is just part of our ongoing effort to respond to players' and developers' requests for data and to arm the community with more ways to contribute to the player experience. We want this API to meet the same high standards as our in-game experiences, so we'll be iterating and evolving as we hear your feedback and suggestions (so share 'em all!)." At the bottom of the page, there are three dark gray boxes with white text. The first box is titled "GET STARTED" and contains the text "Dive into the API with this short and sweet guide". The second box is titled "FULL API REFERENCE" and contains the text "Learn about each endpoint and the data returned". The third box is titled "ISSUE TRACKER" and contains the text "Report an issue or check the status of existing issues". In the bottom right corner of the page, there is a small circular logo.

DEVELOPER

APIS DOCS POLICIES STATUS CHANNELS

LOGIN

## STATS STRAIGHT FROM THE SOURCE

ACTIVE GAMES, MATCH HISTORY, RANKED STATISTICS,  
AND MUCH MORE AT YOUR FINGERTIPS.

SIGN UP NOW

### ABOUT THE RIOT GAMES API

With this site we hope to provide the League of Legends developer community with access to game data in a secure and reliable way. This is just part of our ongoing effort to respond to players' and developers' requests for data and to arm the community with more ways to contribute to the player experience. We want this API to meet the same high standards as our in-game experiences, so we'll be iterating and evolving as we hear your feedback and suggestions (so share 'em all!).

#### GET STARTED

Dive into the API with this short and sweet guide

#### FULL API REFERENCE

Learn about each endpoint and the data returned

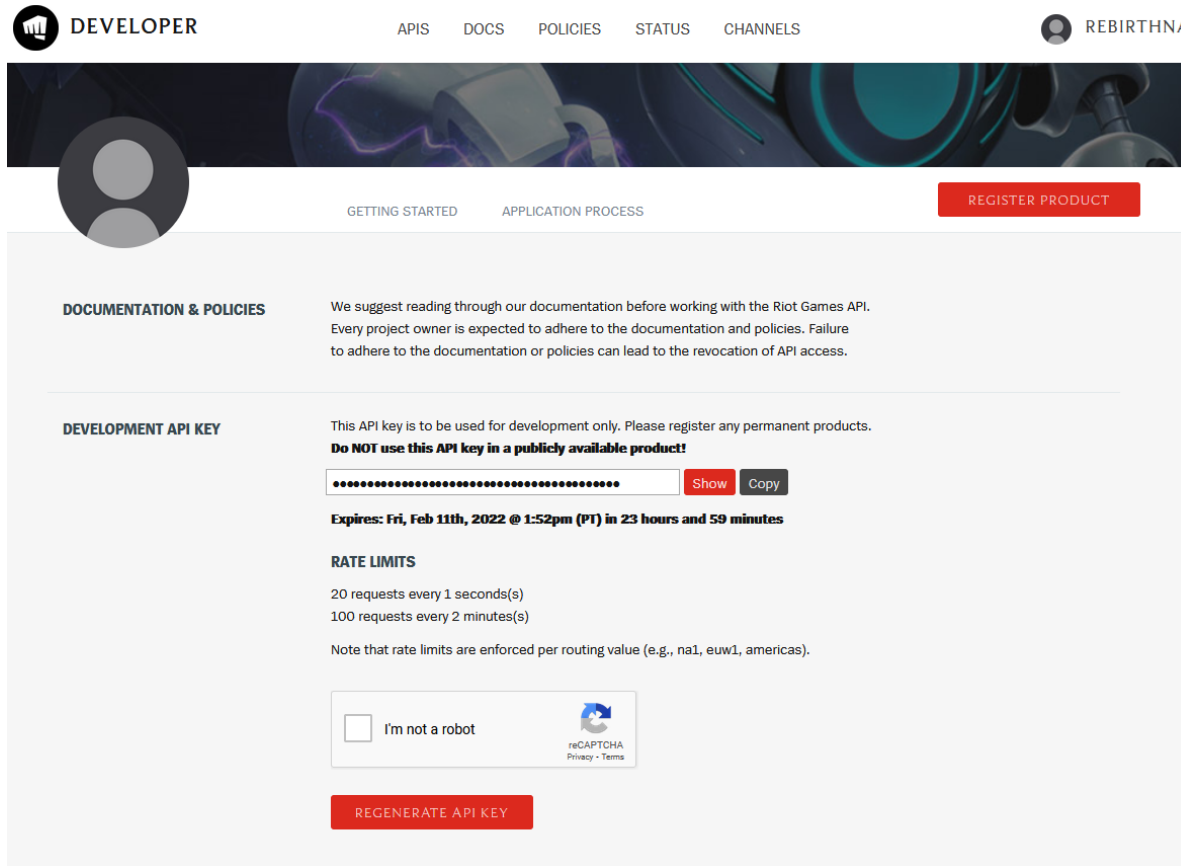
#### ISSUE TRACKER

Report an issue or check the status of existing issues



# ACCESSING THE RIOT API

- Every account has a daily developer API key
- Registering an app gives you a static API key for that product
- **DO NOT SHARE YOUR API KEY**



The screenshot shows the 'DEVELOPER' section of the Riot Games API portal. The user is logged in as 'REBIRTHNA'. The navigation bar includes links for APIS, DOCS, POLICIES, STATUS, and CHANNELS. The main content area is titled 'DOCUMENTATION & POLICIES' and contains a section for 'DEVELOPMENT API KEY'. This section explains that the API key is for development only and provides a warning: 'Do NOT use this API key in a publicly available product!'. Below this, there is a text input field containing a masked API key, with 'Show' and 'Copy' buttons. The expiration date is listed as 'Expires: Fri, Feb 11th, 2022 @ 1:52pm (PT) in 23 hours and 59 minutes'. A 'RATE LIMITS' section specifies '20 requests every 1 seconds(s)' and '100 requests every 2 minutes(s)'. A note states that rate limits are enforced per routing value. At the bottom, there is a reCAPTCHA widget and a 'REGENERATE API KEY' button.

DEVELOPER

APIS DOCS POLICIES STATUS CHANNELS

REBIRTHNA

GETTING STARTED APPLICATION PROCESS REGISTER PRODUCT

**DOCUMENTATION & POLICIES**

We suggest reading through our documentation before working with the Riot Games API. Every project owner is expected to adhere to the documentation and policies. Failure to adhere to the documentation or policies can lead to the revocation of API access.

**DEVELOPMENT API KEY**

This API key is to be used for development only. Please register any permanent products.  
**Do NOT use this API key in a publicly available product!**

..... Show Copy

**Expires: Fri, Feb 11th, 2022 @ 1:52pm (PT) in 23 hours and 59 minutes**

**RATE LIMITS**

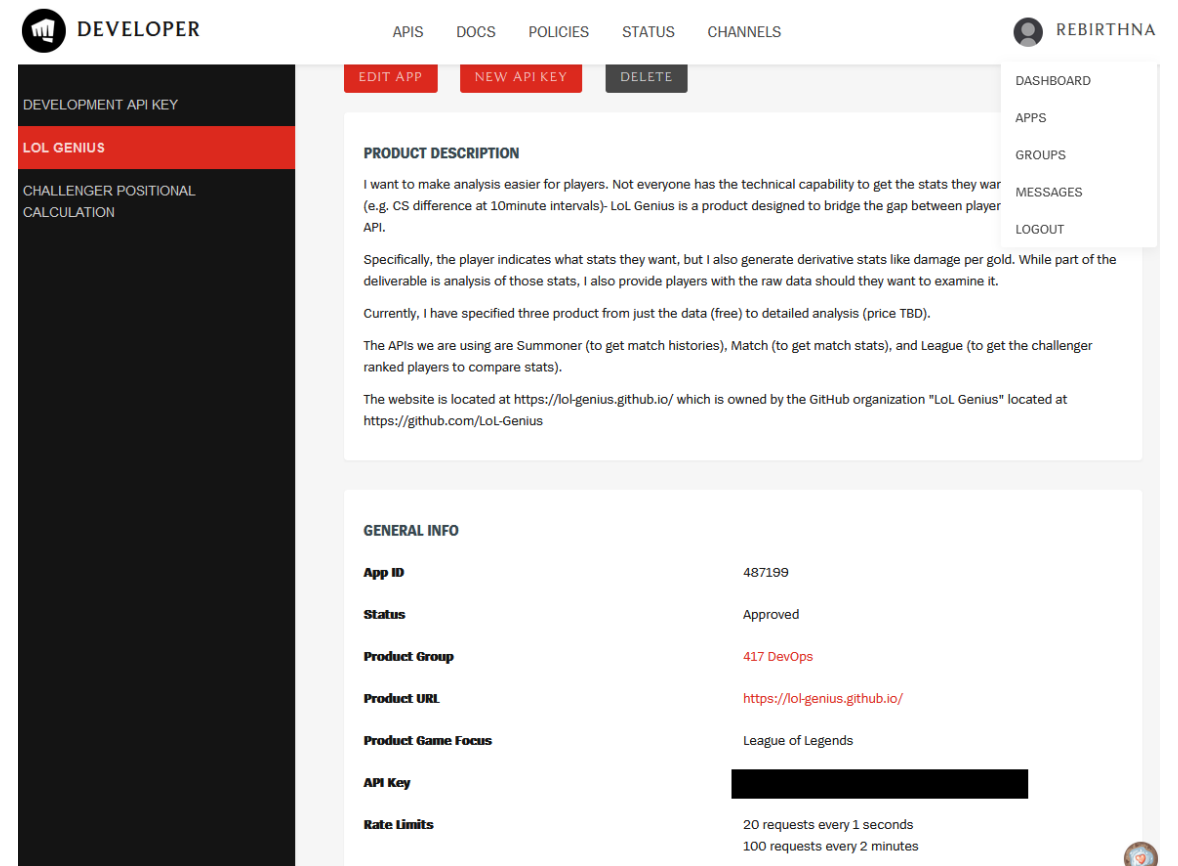
20 requests every 1 seconds(s)  
100 requests every 2 minutes(s)

Note that rate limits are enforced per routing value (e.g., na1, euw1, americas).

☐ I'm not a robot

reCAPTCHA Privacy - Terms

REGENERATE API KEY



The screenshot shows the 'DEVELOPER' section of the Riot Games API portal, specifically the 'LOL GENIUS' app management page. The user is logged in as 'REBIRTHNA'. The navigation bar includes links for APIS, DOCS, POLICIES, STATUS, and CHANNELS. The main content area is titled 'DEVELOPMENT API KEY' and contains a section for 'LOL GENIUS'. This section includes a 'PRODUCT DESCRIPTION' and a 'GENERAL INFO' table. The 'PRODUCT DESCRIPTION' explains the purpose of the app and provides a link to the website. The 'GENERAL INFO' table lists the App ID, Status, Product Group, Product URL, Product Game Focus, API Key, and Rate Limits.

DEVELOPER

APIS DOCS POLICIES STATUS CHANNELS

REBIRTHNA

EDIT APP NEW API KEY DELETE

**DEVELOPMENT API KEY**

**LOL GENIUS**

**CHALLENGER POSITIONAL CALCULATION**

**PRODUCT DESCRIPTION**

I want to make analysis easier for players. Not everyone has the technical capability to get the stats they war (e.g. CS difference at 10minute intervals)- LOL Genius is a product designed to bridge the gap between player API.

Specifically, the player indicates what stats they want, but I also generate derivative stats like damage per gold. While part of the deliverable is analysis of those stats, I also provide players with the raw data should they want to examine it.

Currently, I have specified three product from just the data (free) to detailed analysis (price TBD).

The APIs we are using are Summoner (to get match histories), Match (to get match stats), and League (to get the challenger ranked players to compare stats).

The website is located at <https://lol-genius.github.io/> which is owned by the GitHub organization "LoL Genius" located at <https://github.com/LoL-Genius>

**GENERAL INFO**

<b>App ID</b>	487199
<b>Status</b>	Approved
<b>Product Group</b>	417 DevOps
<b>Product URL</b>	<a href="https://lol-genius.github.io/">https://lol-genius.github.io/</a>
<b>Product Game Focus</b>	League of Legends
<b>API Key</b>	
<b>Rate Limits</b>	20 requests every 1 seconds 100 requests every 2 minutes



# RIOT API ENDPOINTS

- Each entry on the side is an endpoint
- Each endpoint has a different purpose and returns different values
- Most commonly used endpoints:
  - Account-v1
  - League-v4
  - Match-v5
  - Summoner-v4

The screenshot displays the Riot API Developer portal. On the left, a sidebar lists various API endpoints, each with a 'Development API Key' link. The 'ACCOUNT-V1' endpoint is highlighted in red. On the right, the 'ACCOUNT-V1' endpoint is expanded, showing a warning message: 'YOUR DEVELOPMENT API KEY HAS EXPIRED!'. Below the warning, there is a note: 'There are three routing values for account-v1; americas, asia, and europe. You can query for any account in any region. We recommend using the nearest cluster.' The endpoint details are shown in a table with columns for the HTTP method (GET) and the endpoint URL. The table lists four endpoints: 1. GET /riot/account/v1/accounts/by-puuid/{puuid} (Get account by puuid), 2. GET /riot/account/v1/accounts/by-riot-id/{gameName}/{tagLine} (Get account by riot id), 3. GET /riot/account/v1/active-shards/by-game/{game}/by-puuid/{puuid} (Get active shard for a player), and 4. GET /riot/account/v1/accounts/me (Get account by access token).

Method	Endpoint	Action
GET	/riot/account/v1/accounts/by-puuid/{puuid}	Get account by puuid
GET	/riot/account/v1/accounts/by-riot-id/{gameName}/{tagLine}	Get account by riot id
GET	/riot/account/v1/active-shards/by-game/{game}/by-puuid/{puuid}	Get active shard for a player
GET	/riot/account/v1/accounts/me	Get account by access token

# GAME NAME VS. PUUID

- Game name and tagline are what you are used to seeing
- `puuid` (and sometimes `accountID`) is what Riot uses internally to reference players
- You can get one from the other (same API response)
- When searching for a player, you will need one of those instead of just their name/tag

## RESPONSE BODY

```
{
  "puuid": "b-zNFgYAT2sxjwn6483-dpbjI_hIcwKmEiTnZPv4UMa0lg-EzeCuXUJLC-AFXSfExhq_mx-dVqHnWlg",
  "gameName": "RebirthNA",
  "tagLine": "NA1"
}
```

## PATH PARAMETERS

NAME	VALUE	DATA TYPE	DESCRIPTION
tagLine <small>required</small>	NA1	string	When querying for a player by their riot id, the gameName and tagLine query params are required. However not all accounts have a gameName and tagLine associated so these fields may not be included in the response.
gameName <small>required</small>	RebirthNA	string	When querying for a player by their riot id, the gameName and tagLine query params are required. However not all accounts have a gameName and tagLine associated so these fields may not be included in the response.

## SELECT REGION TO EXECUTE AGAINST

AMERICAS

## SELECT APP TO EXECUTE AGAINST

Development API Key

## INCLUDE API KEY AS (?)

☐ Query Param ☒ Header Param

EXECUTE REQUEST

CLOSE

gameName/ tagLine endpoint

</riot/account/v1/accounts/by-riot-id/{gameName}/{tagLine}>

## PATH PARAMETERS

NAME	VALUE	DATA TYPE	DESCRIPTION
puuid <small>required</small>		string	

## SELECT REGION TO EXECUTE AGAINST

AMERICAS

## SELECT APP TO EXECUTE AGAINST

Development API Key

## INCLUDE API KEY AS (?)

☐ Query Param ☒ Header Param

EXECUTE REQUEST

CLOSE

Puuid endpoint

</riot/account/v1/accounts/by-puuid/{puuid}>

# MAKING A REQUEST ON THE WEBSITE

## DEMONSTRATION with

/riot/account/v1/accounts/by-riot-id/{gameName}/{tagLine}

**GET** /riot/account/v1/accounts/by-riot-id/{gameName}/{tagLine} [Get account by riot id](#)

**Jump to Inputs**

**RESPONSE CLASSES**

**Return value: AccountDto**

**AccountDto**

NAME	DATA TYPE	DESCRIPTION
puuid	string	
gameName	string	This field may be excluded from the response if the account doesn't have a gameName.
tagLine	string	This field may be excluded from the response if the account doesn't have a tagLine.

# QUESTIONS?

Contact me



RebirthNA#2359



@LoL-Genius



417devops@gmail.com

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!***