Vocational English III
(Mesleki Yabancı Dil III)
Week 4

15.10.2024

Engineering Faculty

Computer Engineering

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This week we will work on

ENGLISH FOR SOFTWARE DEVELOPMENT & READING-LISTENING ACTIVITIES

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-1

Algorithm (noun) →

- **Example:** "The algorithm efficiently searches through large datasets to find relevant information.”

Code (noun, verb) →

- **Example:** "Developers spend hours writing code to create reliable applications.”

Debug (verb) →

- **Example:** "They debugged the program to fix unexpected errors."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-2

Repository (noun) →

Example: "The team pushed their changes to the GitHub repository for easy access."

Version Control (noun) →

Example: "Version control helps track and manage changes in the codebase."

Loop (noun) →

Example: "A loop runs a set of instructions repeatedly until a condition is met."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-3

API (Application Programming Interface) (noun) → [redacted]

Example: "The API enables applications to communicate with each other."

Function (noun) → [redacted]

Example: "This function calculates the total price after applying a discount."

Variable (noun) → [redacted]

Example: "The variable stores the user's input for later use."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-4

Class (noun) → 🟧

Example: "In object-oriented programming, a class represents a blueprint for objects.”

Object (noun) → 🟧

Example: "Each object created from a class has unique properties.”

Inheritance (noun) → 🟧

Example: "Inheritance allows a new class to inherit properties from an existing class."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-5

Framework (noun) →

Example: "Django is a popular framework for building web applications."

Library (noun) →

Example: "Developers use libraries like NumPy to handle scientific computing in Python."

IDE (Integrated Development Environment) (noun) →

Example: "VS Code is a popular IDE for software developers."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-6

Compile (verb) →

Example: "The code needs to be compiled before it can run on the machine.”

Execute (verb) →

Example: "The program executes the given instructions step-by-step.”

Syntax (noun) →

Example: "Syntax errors occur when code is not written correctly."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-7

Runtime (noun) →

Example: "Errors at runtime can cause a program to crash unexpectedly.”

Bug (noun) →

Example: "The team spent hours fixing a bug in the application.”

Deployment (noun) →

Example: "The new feature is ready for deployment to production servers."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-8

Testing (noun) →

Example: "Testing ensures that the software meets all requirements.”

Unit Test (noun) →

Example: "Unit tests check the functionality of individual parts of the application.”

Integration Test (noun) →

Example: "Integration tests ensure that different components work together."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-9

Scalability (noun) → [redacted]
Example: "The app was designed with scalability to handle more users over time.”

Refactor (verb) → [redacted]
Example: "The developer refactored the code to make it more efficient.”

Back-end (noun) → [redacted]
Example: "Back-end development focuses on server-side functions."

INTRODUCTION TO SOFTWARE DEVELOPMENT VOCABULARY-10

Front-end (noun) →

Example: "The front-end handles what the user interacts with directly."

Authentication (noun) →

Example: "Authentication verifies a user's identity in the system."

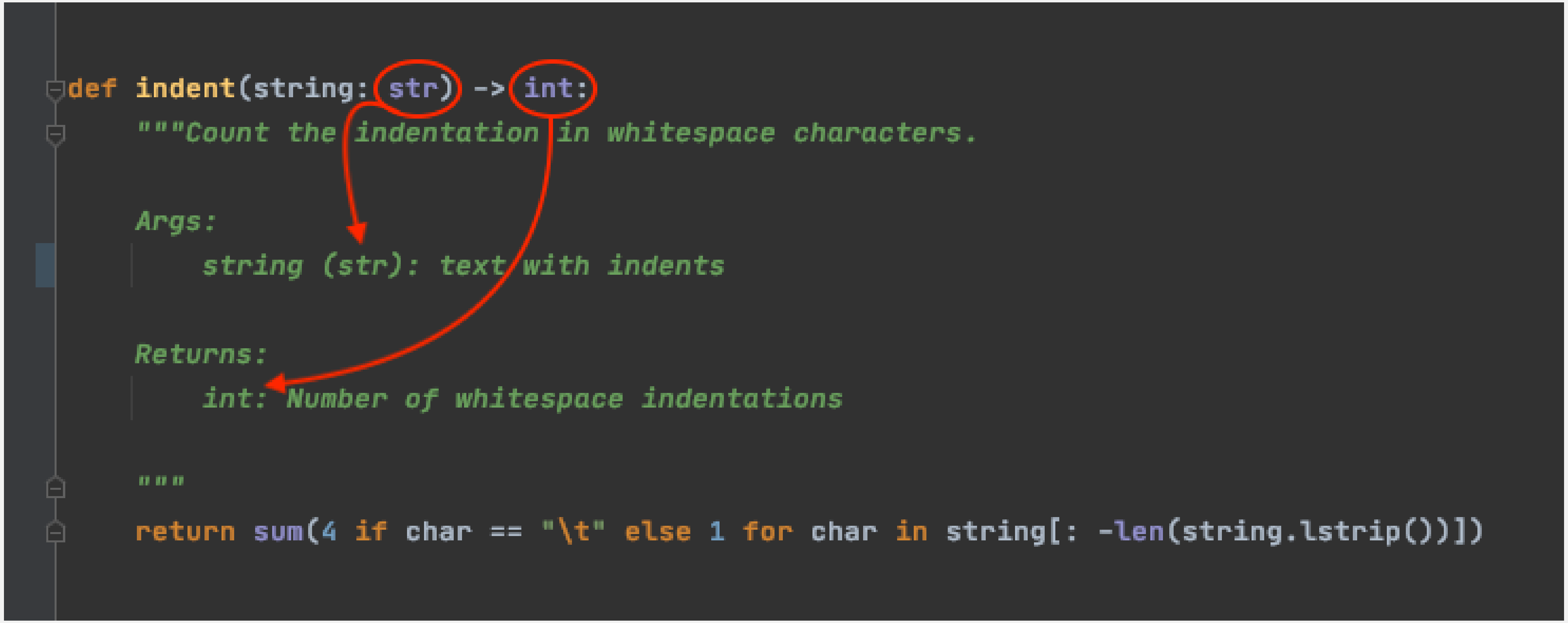
Documentation (noun) →

Example: "Good documentation is essential for maintaining complex codebases."

READING COMPREHENSION IN SOFTWARE DEVELOPMENT

READING COMPREHENSION IN SD-1

DOCSTRINGS :A **DocString** serves as the documentation for a code segment, making it straightforward for you and other developers to understand how various parts of your code function when revisiting it later.



```python
def indent(string: str) -> int:
    """Count the indentation in whitespace characters.

    Args:
        string (str): text with indents

    Returns:
        int: Number of whitespace indentations

    """
    return sum(4 if char == "\t" else 1 for char in string[: -len(string.lstrip())])
```

READING COMPREHENSION IN SD-2

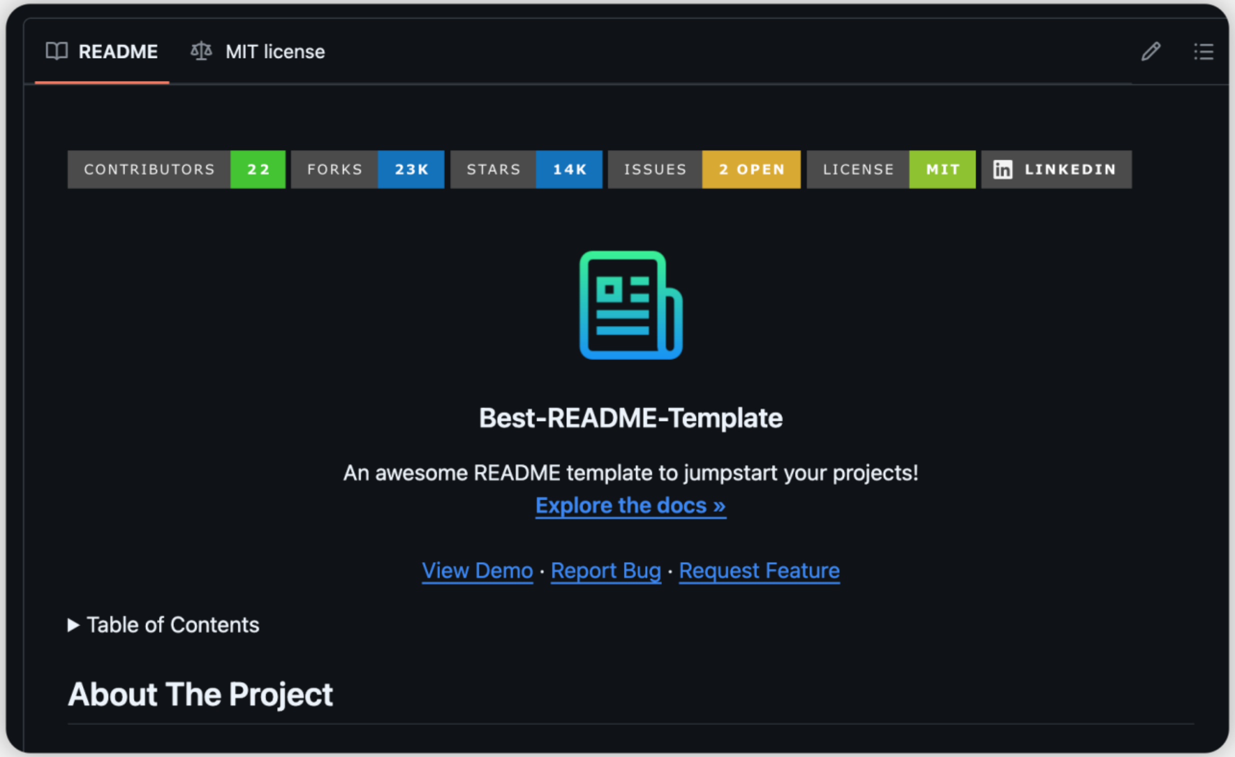
README FILE : A README is often the first item a visitor will see when visiting your repository. README files typically include information on:

- ➢ What the project does
- ➢ Why the project is useful
- ➢ How users can get started with the project
- ➢ Where users can get help with your project
- ➢ Who maintains and contributes to the project [1]

[1] Github

READING COMPREHENSION IN SD-2

EXAMPLE README FILE :



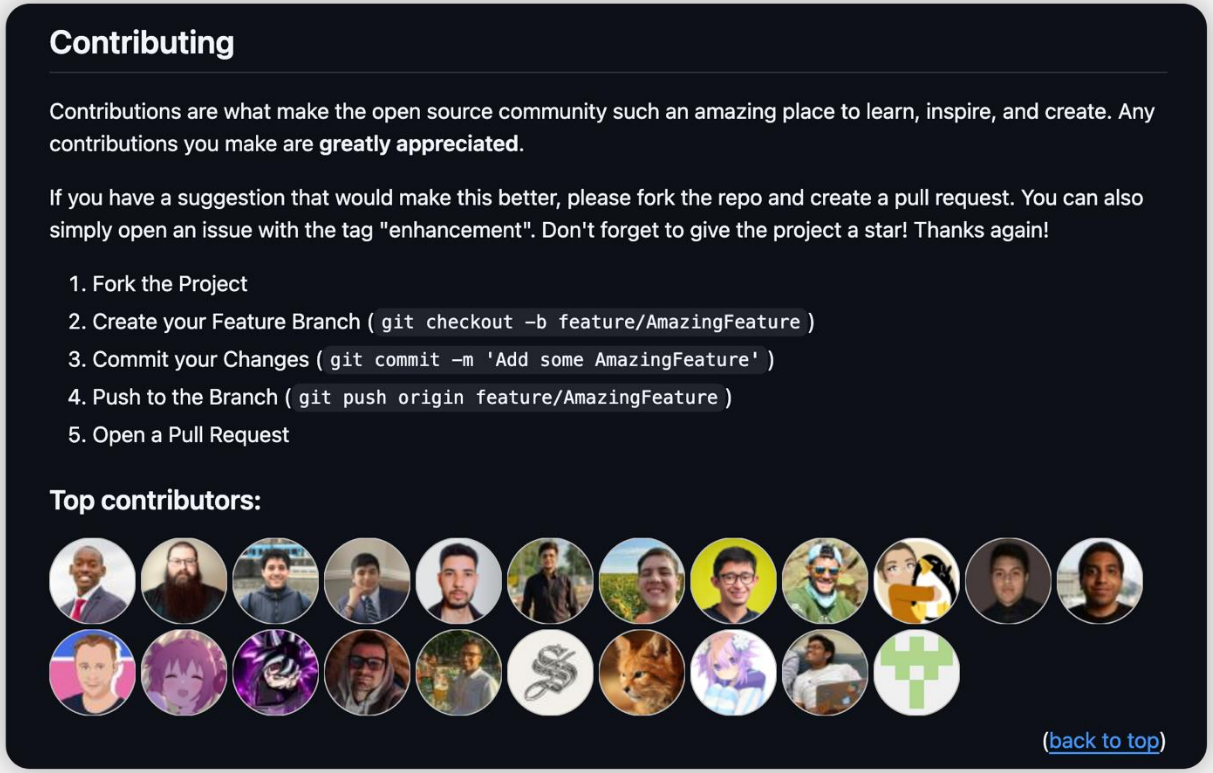
Best-README-Template

An awesome README template to jumpstart your projects!
Explore the docs »

View Demo · Report Bug · Request Feature

▶ Table of Contents

About The Project



Contributing

Contributions are what make the open source community such an amazing place to learn, inspire, and create. Any contributions you make are **greatly appreciated**.

If you have a suggestion that would make this better, please fork the repo and create a pull request. You can also simply open an issue with the tag "enhancement". Don't forget to give the project a star! Thanks again!

1. Fork the Project
2. Create your Feature Branch (`git checkout -b feature/AmazingFeature`)
3. Commit your Changes (`git commit -m 'Add some AmazingFeature'`)
4. Push to the Branch (`git push origin feature/AmazingFeature`)
5. Open a Pull Request

Top contributors:

(back to top)

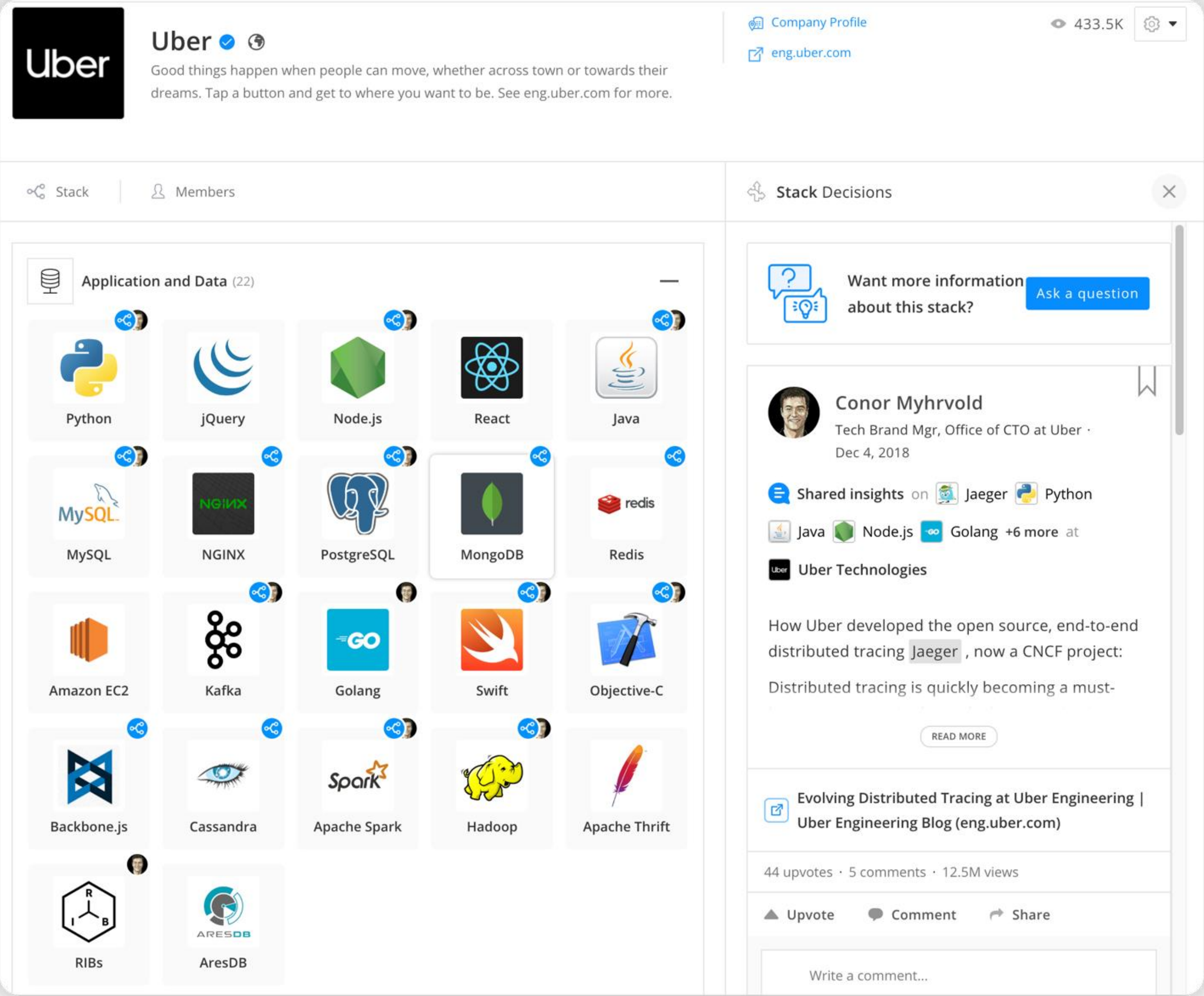
Link: https://github.com/othneildrew/Best-README-Template

READING COMPREHENSION IN SD-3

TECHNICAL WEBSITES

STACKSHARE

The Largest Developer Community for Tech Stacks



Uber

Good things happen when people can move, whether across town or towards their dreams. Tap a button and get to where you want to be. See eng.uber.com for more.

Want more information about this stack?

Conor Myhrvold

Tech Brand Mgr, Office of CTO at Uber · Dec 4, 2018

Shared insights on Jaeger Python Java Node.js Golang +6 more at Uber Technologies

How Uber developed the open source, end-to-end distributed tracing Jaeger , now a CNCF project:

Distributed tracing is quickly becoming a must-

Evolving Distributed Tracing at Uber Engineering | Uber Engineering Blog (eng.uber.com)

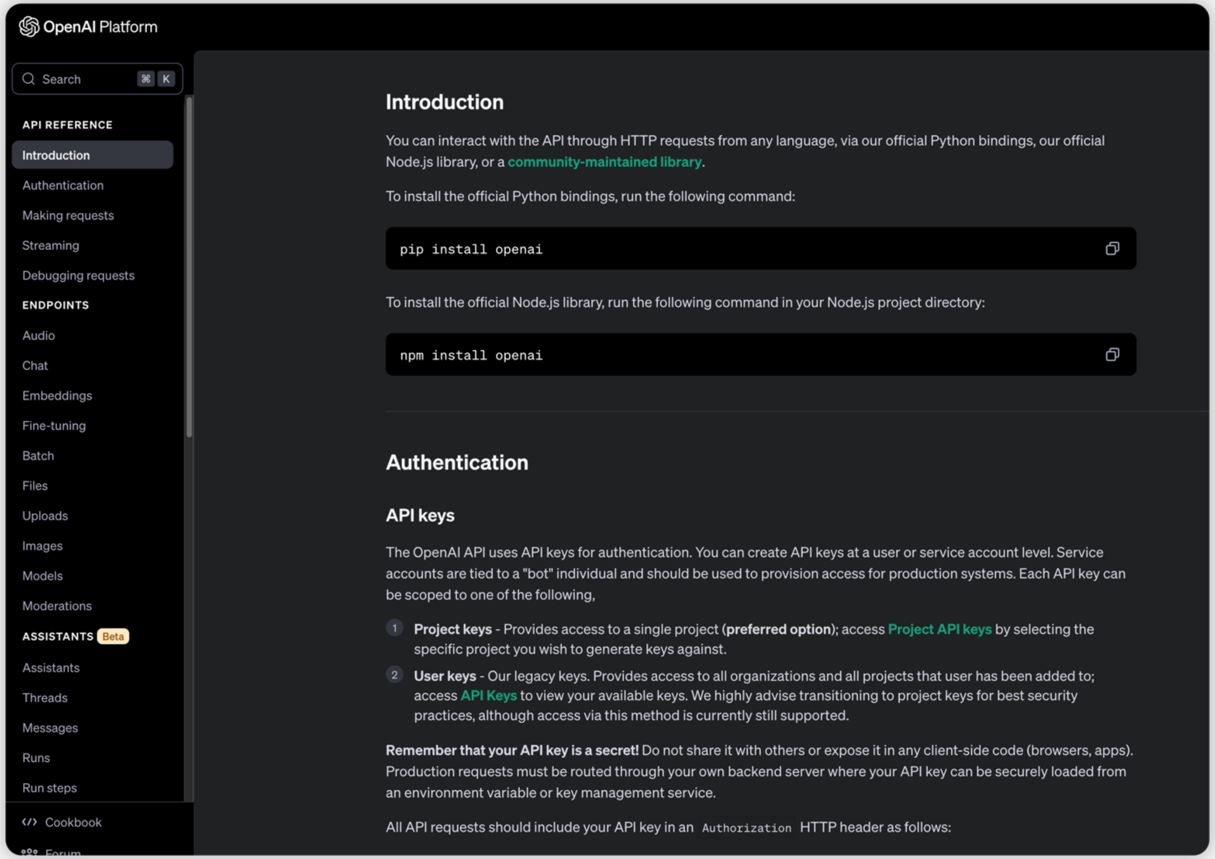
44 upvotes · 5 comments · 12.5M views

https://stackshare.io/

READING COMPREHENSION IN SD-4

REFERENCE DOCUMENTATIONS

OPENAI



Introduction

You can interact with the API through HTTP requests from any language, via our official Python bindings, our official Node.js library, or a community-maintained library.

To install the official Python bindings, run the following command:

```
pip install openai
```

To install the official Node.js library, run the following command in your Node.js project directory:

```
npm install openai
```

Authentication

API keys

The OpenAI API uses API keys for authentication. You can create API keys at a user or service account level. Service accounts are tied to a "bot" individual and should be used to provision access for production systems. Each API key can be scoped to one of the following,

1. **Project keys** - Provides access to a single project (**preferred option**); access Project API keys by selecting the specific project you wish to generate keys against.
2. **User keys** - Our legacy keys. Provides access to all organizations and all projects that user has been added to; access API Keys to view your available keys. We highly advise transitioning to project keys for best security practices, although access via this method is currently still supported.

Remember that your API key is a secret! Do not share it with others or expose it in any client-side code (browsers, apps). Production requests must be routed through your own backend server where your API key can be securely loaded from an environment variable or key management service.

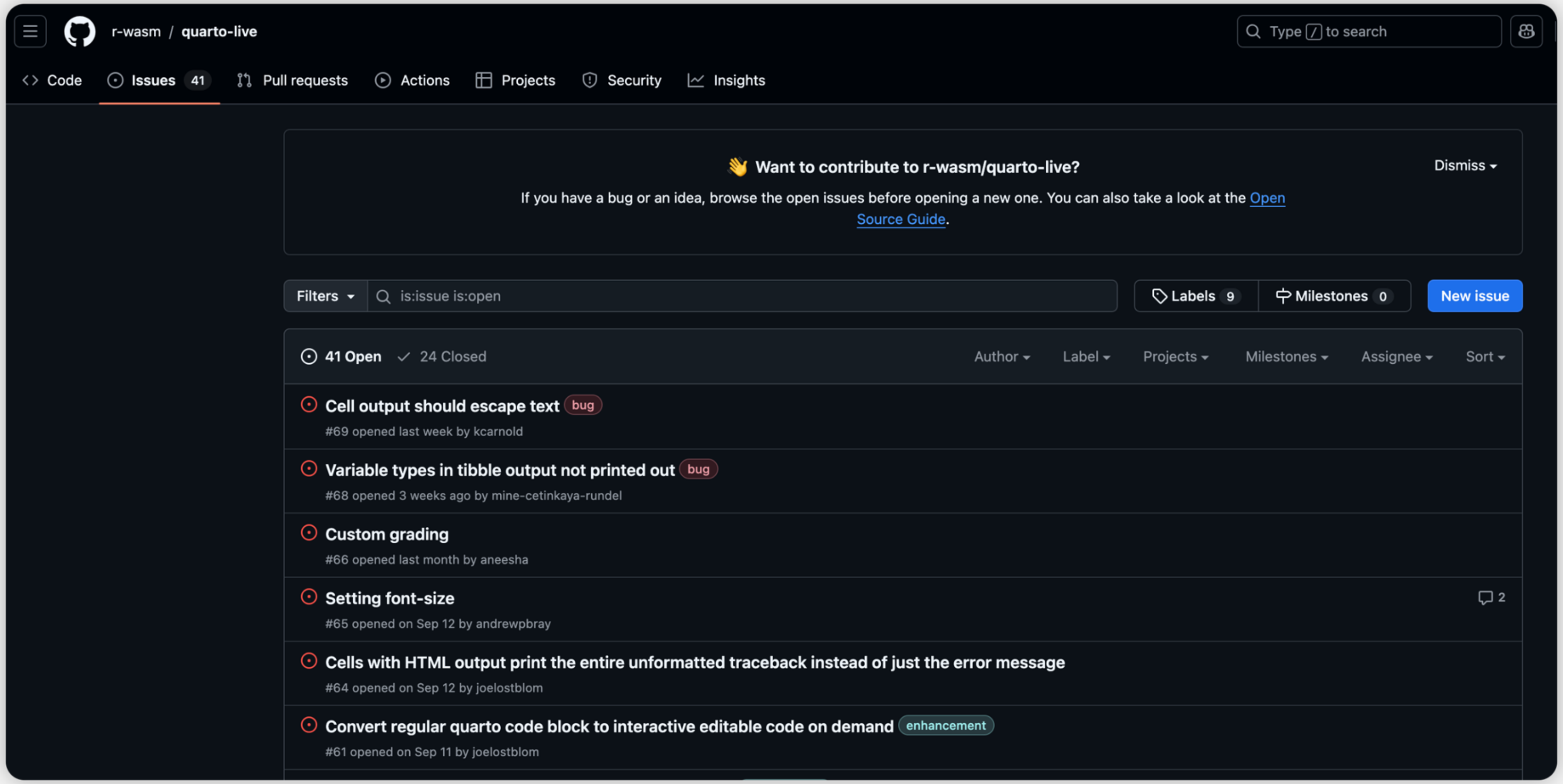
All API requests should include your API key in an `Authorization` HTTP header as follows:

https://platform.openai.com/docs/api-reference/introduction

READING COMPREHENSION IN SD-5

ISSUE TRACKERS

GITHUB



👋 Want to contribute to r-wasm/quarto-live?

If you have a bug or an idea, browse the open issues before opening a new one. You can also take a look at the Open Source Guide.

Cell output should escape text bug
#69 opened last week by kcarnold

Variable types in tibble output not printed out bug
#68 opened 3 weeks ago by mine-cetinkaya-rundel

Custom grading
#66 opened last month by aneesha

Setting font-size 2
#65 opened on Sep 12 by andrewpbray

Cells with HTML output print the entire unformatted traceback instead of just the error message
#64 opened on Sep 12 by joelostblom

Convert regular quarto code block to interactive editable code on demand enhancement
#61 opened on Sep 11 by joelostblom

https://github.com/r-wasm/quarto-live/issues

LISTENING

Learning English For Work
Short podcasts to help you improve your English at work. Find more programmes and activities at www.bbclearningenglish.com
HOME PAGE for the podcast below: https://www.bbc.co.uk/programmes/p0h6ffwg

1- Job Applications : Writing CVs

Learning English For Work

Pippa and Phil talk about what to include and what to leave out of a CV.

Listen the podcast here » https://www.bbc.co.uk/programmes/p0jl5nmg

ASSIGNMENT

Listen the next episode. **Job Applications: Understanding job descriptions**
Link: https://www.bbc.co.uk/sounds/play/p0jn17jz

Answer these questions:

- What is a job description, and why is it important when applying for a job in engineering?
- Why might some job descriptions use formal or technical language, and how could this affect your application?
- According to Amy, what two main parts usually make up a job description?
- How can understanding soft skills like "problem-solving" or "attention to detail" benefit you in technical roles?
- Why should you keep referring to the job description even after submitting your application?

EOF*

*End of Fun/File