

Book Suggestion App

Python Installation & Package Setup Guide

Install Individual Packages

Core packages required for the Book Suggestion App
pip install pandas
pip install requests
pip install PyQt5

Package Details & Versions

Package	Purpose	Minimum Version	Installation Command
pandas	Data manipulation and analysis	1.3.0+	pip install pandas
requests	HTTP library for API calls	2.25.0+	pip install requests
PyQt5	GUI framework for desktop app	5.15.0+	pip install PyQt5

Built-in packages (no installation needed):

- sys - System-specific parameters and functions
 - random - Generate random numbers
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Project Overview

Project Name: Book suggestion app

Purpose: IC Leaf Final Capstone Project

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Version: 1.0

Date: 28 May 2025

This is a desktop GUI application built with PyQt5 that helps users discover books by fetching data from the Google Books API and providing filtering and random suggestion capabilities.

Functions Analysis

`fetch_books(subject, max_results=40)`

Purpose: Retrieves book data from Google Books API for a specified genre/subject

Parameters:

- **subject:** The book genre/category to search for
- **max_results:** Maximum number of books to retrieve (default: 40)

Return Value: pandas DataFrame with columns: Title, Authors, Genre, Publication Year, Ratings

Class and Methods Analysis

`MainWindow(QMainWindow)`

Purpose: Main GUI window class that provides the user interface for book filtering and suggestions

Constructor: `__init__(self, df)`

- Initializes the main window with a pandas DataFrame of books
- Calls `init_ui()` to set up the user interface
- Stores the book dataset as an instance variable

1. Method: `init_ui(self)`

Purpose: Creates and configures the graphical user interface

2. Method: `apply_filter(self)`

Purpose: Filters the book dataset based on user-selected criteria and displays matching books

3. Method: `suggest_random(self)`

Purpose: Selects and displays a random book from the filtered dataset with complete details

Main Function:

```
if __name__ == "__main__":
```

Purpose: Application entry point that initializes data and launches the GUI
