

# FLASK COMPLETE BEGINNER GUIDE (WITH SAMPLE PROJECT)

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## What is Flask?

- Flask is a **Python web framework** to build web apps quickly.
  - It helps you display HTML, accept input (like forms), and create full websites or APIs.
  - It's lightweight, easy to learn, and powerful enough to scale.
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## Prerequisites

- Only **Python basics** are enough. No need for frontend experience to begin.
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## Step-by-Step Guide to Build a Simple Flask Web App

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### Folder Structure

```
my_flask_app/  
├── app.py  
├── templates/  
│   ├── index.html  
│   └── about.html
```

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### ◇ Step 1: Install Flask

pip install flask

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### ◇ Step 2: Create Your First File **app.py**

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```
from flask import Flask, render_template
```

```
app = Flask(__name__)
```

```
@app.route('/')
def home():
    return render_template("index.html")
```

```
@app.route('/about')
def about():
    return render_template("about.html")
```

```
if __name__ == '__main__':
    app.run(debug=True)
```

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### ◇ Step 3: Create **index.html** inside a folder named **templates**

```
<!-- templates/index.html -->
<!DOCTYPE html>
<html>
<head>
  <title>My Flask App</title>
</head>
<body>
  <h1>🏠 Welcome to My First Flask Website</h1>
  <a href="/about">Go to About Page</a>
</body>
</html>
```

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### ◇ Step 4: Create **about.html**

```
<!-- templates/about.html -->
<!DOCTYPE html>
<html>
<head>
  <title>About</title>
</head>
<body>
  <h1>📄 About Page</h1>
  <p>This is the About Page of our Flask App.</p>
  <a href="/">Back to Home</a>
```

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</body>

</html>

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## Step 5: Run Your App

python app.py

Open in browser: <http://127.0.0.1:5000/>

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## What You Learned

Feature	Description
<code>@app.route()</code>	Maps URL paths to Python functions
<code>render_template()</code>	Loads HTML from the <code>templates/</code> folder
<code>/, /about</code>	Routes for different pages
Linking Pages	HTML <code>&lt;a href="..."&gt;</code> used for navigation

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## PROJECT TO ADD IN RESUME

### Project Title: Simple Personal Website using Flask

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#### ◇ Description (for Resume)

Built a personal portfolio website using Flask framework, featuring multiple pages like Home and About. Implemented dynamic routing, HTML rendering with Jinja2 templates, and local server setup for development. Demonstrated understanding of Python web frameworks, templating, and routing mechanisms.

## ♦ Technologies Used

- Python
  - Flask
  - HTML
  - Jinja2 templating
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## How to Explain in Interview (Story Format)

"As part of learning backend web development, I built a personal website using Flask. I created multiple routes like the home page and about page. I used Flask's `@app.route()` to handle URL routing and Jinja2 templates to render HTML pages. I set up the server locally and tested the site on my browser. It helped me understand how server-side routing, templating, and web requests work in a real-world application. Later, I even extended this to handle user form input and database interaction."

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## Next Steps (Optional Learning)

Once you're comfortable, explore:

- Forms (`<form>` + Flask `request.form`)
- Saving data (with SQLite or JSON)
- Deploying to Heroku or Render
- Adding Bootstrap for UI styling
- Flask Blueprints for large apps

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## **About the Author**


**Gowtham SB** is a **Data Engineering expert, educator, and content creator** with a passion for **big data technologies, as well as cloud and Gen AI**. With years of experience in the field, he has worked extensively with **cloud platforms, distributed systems, and data pipelines**, helping professionals and aspiring engineers master the art of data engineering.

Beyond his technical expertise, Gowtham is a **renowned mentor and speaker**, sharing his insights through engaging content on **YouTube and LinkedIn**. He has built one of the **largest Tamil Data Engineering communities**, guiding thousands of learners to excel in their careers.

Through his deep industry knowledge and hands-on approach, Gowtham continues to **bridge the gap between learning and real-world implementation**, empowering individuals to build **scalable, high-performance data solutions**.

## **Socials**

 **YouTube** - <https://www.youtube.com/@dataengineeringvideos>

 **Instagram** - <https://instagram.com/dataengineeringtamil>

 **Instagram** - <https://instagram.com/thedatatech.in>

 **Connect for 1:1** - <https://topmate.io/dataengineering/>

 **LinkedIn** - <https://www.linkedin.com/in/sbgowtham/>

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