How to Use These Full Stack Project Ideas

Full-stack developers come from all backgrounds and experience levels. You may have a lot of knowledge regarding front-end design, but you're only now figuring out back-end development.

In many respects, being a full-stack developer is about problem-solving. A full-stack developer can use any one of dozens of languages and technologies. So, a full stack project idea will outline the general project requirements — but it's up to you to figure out how to achieve them.

Basic Full Stack Projects

These projects are perfect for beginners who want to build a strong foundation in web development. Anyone with basic front-end and back-end knowledge should be able to complete these projects, but completing them well is a matter of skill and experience.

1. To-Do List App

Everyone wants to do things "better." A to-do list app lets a user store information to be recalled later. This full-stack project should let the user:

Store, retrieve, and modify "to do" information within a database

View "to do" information in a clean, attractive format

View the application on a mobile computer or desktop computer

2. Calculator

A calculator is a great chance to develop your layout skills. Calculators also require some input/output knowledge, as you need to capture data from the user's peripherals. Your calculator app should:

Depict the visual element of a calculator cleanly on any platform

React to the user's input, both through the mouse and keyboard

Save the user's history, even if it just does so in a text file

3. Weather App

What's the weather like outside? Don't look out the window. Program an app instead. Your weather app should:

Pull weather information from a database

Change its appearance based on the weather

Use an attractive stylesheet to deliver hourly and weekly forecasts

As an additional challenge, connect your app to a weather API to pull real-time weather information based on the user's location. There are free weather APIs available that you can easily connect to through JavaScript.

4. Quiz App

This is probably one of the most useful full-stack coding project ideas for portfolios; you can even use it to quiz yourself on full-stack development. Your quiz app should:

Pull quiz questions and answers from a database

Display questions to the user and prompt them for an answer

Track and retain the user's score, eventually letting them "win" or "lose”

5. Interactive Resume

Why not give potential employers a treat? Build an interactive resume that doesn't just display your skills, but also prompts the user to inquire for more information. Your interactive resume should:

Display your resume in an attractive, mobile-friendly format.

Prompt users to send you their information (if they want to learn more).

Show off dynamic, interactive CSS assets, such as parallax.

When you're just building your skills, you don't need to develop "killer" and unique full-stack app ideas. None of the above projects should be too difficult — focus on making them as perfect as possible.

Intermediate Full Stack Developer Projects

These projects are ideal for those with a strong foundation in web development and looking to add more skills to their arsenal. These projects will provide a legitimate "portfolio" piece.

6. To-Do List App with Authentication

Security is essential to modern engineering. Go back to your earlier to-do list app and incorporate authentication. Your app should:

Let a user set and change their password

Enforce solid password requirements

Customize itself based on the user (if only by mentioning their login name)

For a challenge, ask yourself what you need to do to add multi-factor authentication to your app.

7. Music Streaming App

A music app is one of the most common full-stack app ideas. Everyone loves music. But what can you do to make your music streaming app better? At its most basic, your app should:

Pull music from a database of songs

Provide a music streaming interface

Let users either select songs on a playlist or search for songs

To challenge yourself, build a suggestion engine. Track what users play and suggest similar songs based on their preferences.

8. Social Media App

Everyone wants to be the next Twitter. Bring some creativity to this project. If you could build a social media platform, what would you change? Your social media app should:

Let users create and log into accounts

Provide interactivity between users

Store information within a database

9. E-Commerce App

Do you dream of eventually selling things through your full stack application ideas? Consider building an e-commerce app to do so. An e-commerce app is just a digital storefront. Your e-commerce app should:

Pull products from a database

Let users create accounts and purchase products

Change product information, such as quantities, as items are purchased

Stuck on developing a payment processor? Paypal and Stripe have easy-to-use processing APIs that you can integrate.

10. Job Board

Maybe you don't want to build full-stack portfolio projects. Maybe you want to help other people get jobs. A job board can be a fun project, although you need to keep it updated. It should:

Pull job information from a database

Display job information based on search criteria and filters

Let users save certain jobs or even respond to them

If you want to make this job board autonomous, consider programming it to scrape information from other sites.

These projects aren't likely to become a "full project" that you can make money from—but they're a great way to show off your skills. In reality, you can take any of the MERN stack project ideas and give them a clever twist.

Advanced Full-Stack Portfolio Projects

What if you want to build something that has the potential to become a usable app or business? Let's look at some advanced full-stack projects that will stretch your programming muscles.

11. A Real-Time Game App

Do you have a burning idea for a game that you've passionately pursued full-stack development to achieve? The time is now. To qualify as a game, your project should:

Support user accounts and user data through a database

Provide some interactivity or gameplay elements

Have clear goals or provide some state of "winning" or "losing"

Provide a profit model, either through subscription or in-app purchases

Operate both as a desktop application and a mobile application

12. Workout Tracker App

Tracking workouts or exercises puts an interesting spin on a regular scheduling app. You can do this with any type of recurring hobby. Develop an app that will:

Support user accounts and customization with authentication

Schedule workouts/hobbies and reschedule missed sessions

Let users determine the frequency and preferred scheduling of their workouts

Connect users through support groups and competitive teams

Intelligently send users reminders and alerts

13. Video Calling App

Video is now ubiquitous. But just ten years ago, video calling was exhausting. Think about how you could make the process of video calling easier. Create a video calling app that can:

Let users log in to their accounts and connect with those on their contact list.

Support multiple users within the same video conferencing room.

Store video calls, on request, for reference later.

Support one-on-one calls scheduled between users.

Provide additional features such as text chats.

14. Image Sharing App

You've seen Instagram and Imgur. It's time to make your own image-sharing app. Image sharing isn't just popular; there are a lot of potential niches to fill.

An image sharing app:

Let users upload, store, and manage images

Provide filters so users can update and edit their images

Compress images intelligently for better performance

Automatically prune unused images of abandoned images

Lets users pay for more space on or other premium features

15. Collaborative Editing App

This full-stack project tests whether you're ready to create a real-time application. A collaborative editing app will need to:

Support multiple users in a single room editing a file

Alert users if they are trying to edit something someone else has edited

Combine edits intelligently or lock files when they are being edited

Provide easy roll-backs to prior versions of a file

Authenticate users and support multiple permission types (such as viewer and editor)

Even with advanced projects, you'll still need to get a little creative to give each project some value. But if you can figure out something unique, you could build something marketable.