**📘 Next.js**

[**What is Next.js?**](https://nextjs.org/docs#what-is-nextjs)

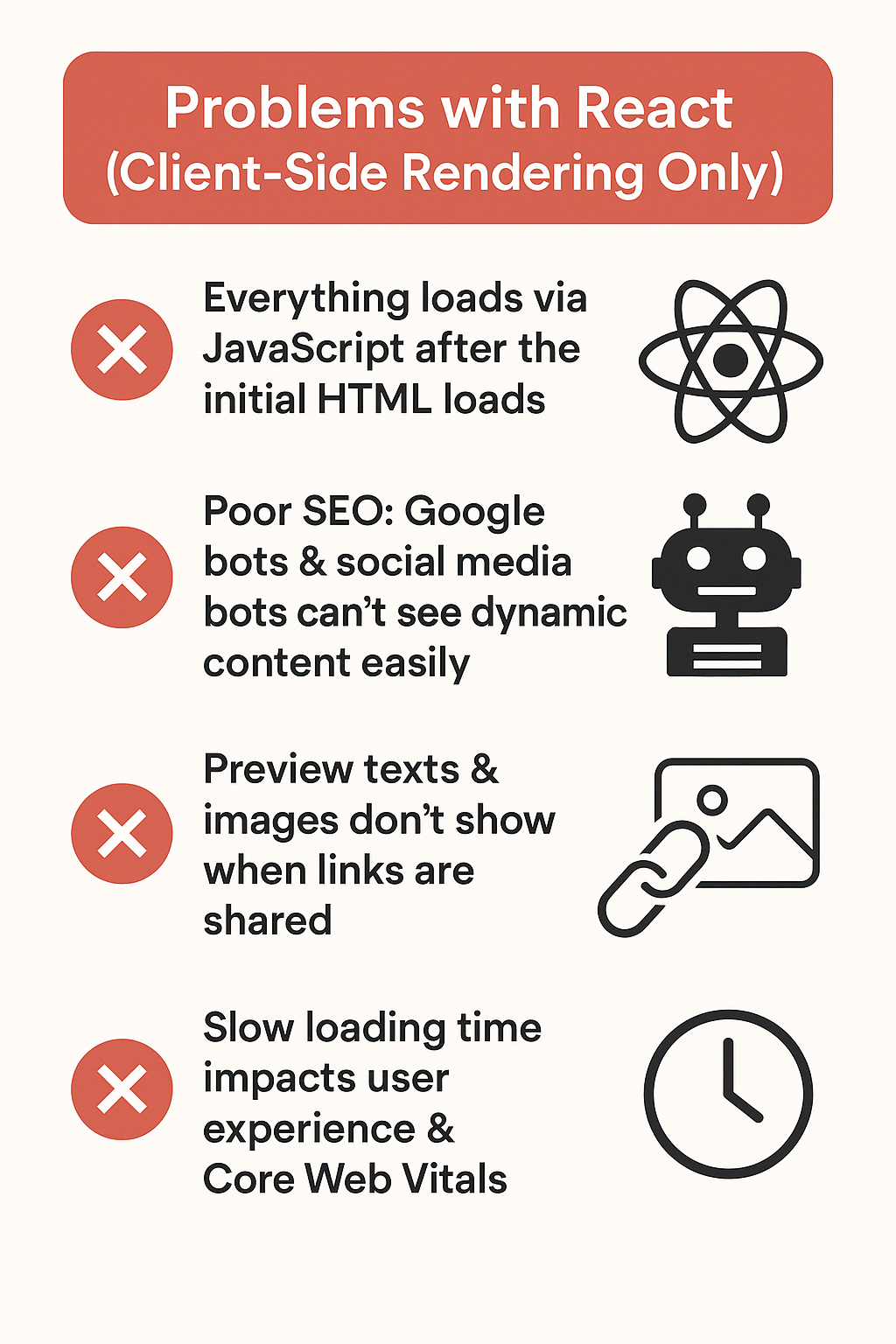
Next.js is a React framework for building full-stack web applications.

 A React framework developed by **Vercel**.

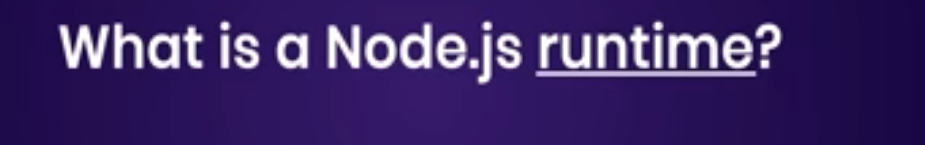
 Used for building **SEO-friendly** and **high-performance** web apps.

 Popular among top companies like Netflix, TikTok, etc.

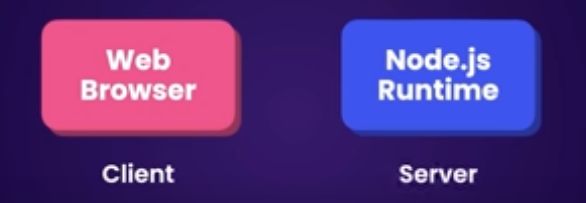
**❌ Problems with React (Client-Side Rendering Only):**



Next.js as a Full Stack Framework:\*\* Unlike React which is purely a UI library, Next.js provides a full-fledged framework integrating routing, rendering, and backend runtime under one umbrella. This simplifies development by allowing frontend and backend code to coexist seamlessly in a single project, improving maintainability and reducing complexity. The built-in Node.js runtime enables server-side rendering and API routes without maintaining separate backend services.



There are Two main way to execute the JavaScript code: -



There are two ways we can execute JavaScript code:

* On the **client side**, within a web browser
* On the **server side**, within a **Node.js runtime**

A Node.js runtime is simply a program that allows us to execute JavaScript code outside of a browser—on the server.

Next.js comes with a built-in Node.js runtime, which enables some powerful capabilities.  
We can perform **full-stack development** using a single Next.js project—writing both frontend and backend code together.

* The **backend code** runs in the Node.js runtime on the server.
* The **frontend code** is bundled and sent to the client, where it executes in the browser.

**Install and set up a new Next.js project:**

**🛠 Step 1: Create a Next.js App:** Use **npx** (npm package runner):

npx create-next-app@latest my-next-app

PS G:\4.WebDevelopment\3.Nextjs> npx create-next-app@latest nextjs

Need to install the following packages:

create-next-app@15.3.5

Ok to proceed? (y) y

√ Would you like to use TypeScript? ... No / Yes

√ Would you like to use ESLint? ... No / Yes

√ Would you like to use Tailwind CSS? ... No / Yes

√ Would you like your code inside a `src/` directory? ... No / Yes

√ Would you like to use App Router? (recommended) ... No / Yes

√ Would you like to use Turbopack for `next dev`? ... No / Yes

√ Would you like to customize the import alias (`@/\*` by default)? ... No / Yes

Creating a new Next.js app in G:\4.WebDevelopment\3.Nextjs\nextjs.

PS G:\4.WebDevelopment\3.Nextjs>

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PS G:\4.WebDevelopment\3.Nextjs>

PS G:\4.WebDevelopment\3.Nextjs>

PS G:\4.WebDevelopment\3.Nextjs>

PS G:\4.WebDevelopment\3.Nextjs>

PS G:\4.WebDevelopment\3.Nextjs>

PS G:\4.WebDevelopment\3.Nextjs> cd .\nextjs\

PS G:\4.WebDevelopment\3.Nextjs\nextjs> git init

Reinitialized existing Git repository in G:/4.WebDevelopment/3.Nextjs/nextjs/.git/

PS G:\4.WebDevelopment\3.Nextjs\nextjs> git add .

PS G:\4.WebDevelopment\3.Nextjs\nextjs> git commit -m "Inital commit1"

On branch master

nothing to commit, working tree clean

PS G:\4.WebDevelopment\3.Nextjs\nextjs>

\* History restored

PS G:\4.WebDevelopment\3.Nextjs>

\* History restored

PS G:\4.WebDevelopment\3.Nextjs> npx create-next-app@latest my-next-app1

√ Would you like to use TypeScript? ... No / Yes

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Creating a new Next.js app in G:\4.WebDevelopment\3.Nextjs\my-next-app1.

Using npm.

Initializing project with template: app-tw

Installing dependencies:

- react

- react-dom

- next

Installing devDependencies:

- @tailwindcss/postcss

- tailwindcss

- eslint

- eslint-config-next

- @eslint/eslintrc

added 334 packages, and audited 335 packages in 2m

136 packages are looking for funding

run `npm fund` for details

found 0 vulnerabilities

Initialized a git repository.

Success! Created my-next-app1 at G:\4.WebDevelopment\3.Nextjs\my-next-app1

PS G:\4.WebDevelopment\3.Nextjs>