



**Education**  
@topdev\_media



Javascript

# Vite.js

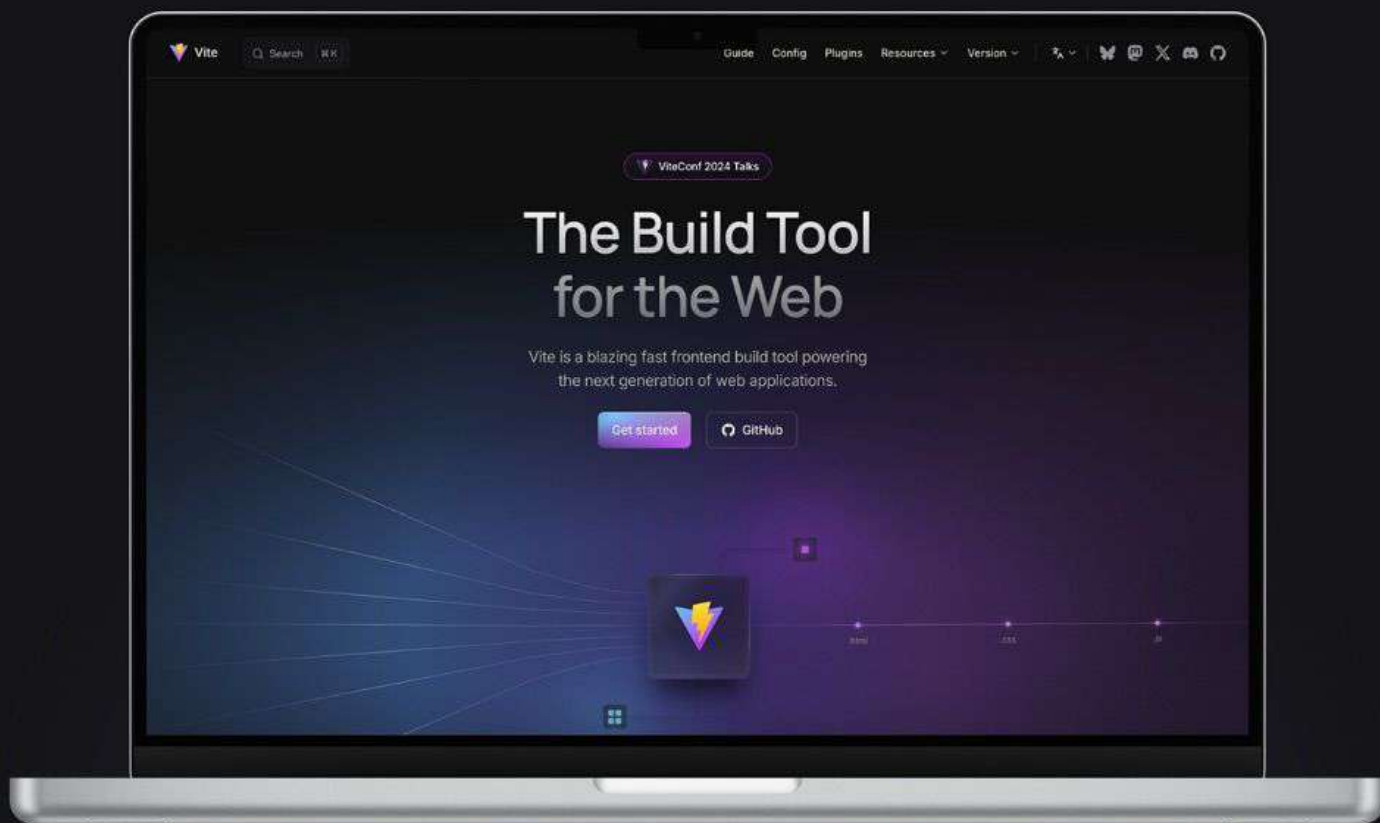
# CHEATSHEET

Save it for later !

# WHAT IS VITE?

Vite is a modern **frontend** build **tool** that provides a **fast development server** and **optimized production builds**.

It leverages native ES modules and offers features like instant server start and lightning-fast Hot Module Replacement (HMR).



# INSTALLATION

## Create a new project

```
npm create vite@latest my-project  
cd my-project  
npm install
```

## Start the development server

```
npm run dev
```

## Build for production

```
npm run build
```

## Preview the production build

```
npm run preview
```

## KEY FEATURES

- **Instant Server Start:** On-demand file serving over native ES modules, eliminating the need for bundling.
- **Lightning-Fast HMR:** Hot Module Replacement that remains fast regardless of app size.
- **Rich Features:** Out-of-the-box support for TypeScript, JSX, CSS, and more.
- **Optimized Production Build:** Pre-configured with Rollup for multi-page and library mode support.

# PROJECT STRUCTURE

```
my-project/
├── public/      # Static assets
├── src/         # Source files
│   ├── main.js  # Entry point
│   └── App.vue   # App component (example for Vue)
├── index.html   # Main HTML file
├── package.json # Project metadata
└── vite.config.js # Vite configuration
```

# CONFIGURATION

## **vite.config.js**

Basic Vite configuration file:

```
import { defineConfig } from 'vite';

export default defineConfig({
  base: '/', // Base public path
  server: {
    port: 3000, // Custom dev server port
  },
  build: {
    outDir: 'dist', // Output directory
  },
});
```

## **Using Plugins:**

```
import { defineConfig } from 'vite';
import vue from '@vitejs/plugin-vue';

export default defineConfig({
  plugins: [vue()],
});
```



# ENVIRONMENT VARIABLES

## Define environment variables in .env files:

- .env (shared)
- .env.development (only for development)
- .env.production (only for production)

## Access them in your code

```
console.log(import.meta.env.VITE_API_URL);
```

## Example .env file

```
VITE_API_URL=https://api.example.com
```

# STATIC ASSETS

**Add assets to the public folder (served as-is):**

- Accessible in your code as `/path/to/asset`.

**Import assets in source files:**

```
import image from './assets/image.png';
```

# CUSTOMIZING DEV SERVER

**Modify the server field in vite.config.js**

```
server: {  
  host: '0.0.0.0', // Expose to local network  
  port: 8080,      // Custom port  
  open: true,      // Auto open in browser  
  proxy: {         // Proxy API requests  
    '/api': {  
      target: 'https://api.example.com',  
      changeOrigin: true,  
    },  
  },  
},
```



# HOT MODULE REPLACEMENT (HMR)

**Default behavior:** Automatically reloads modules during development.

**Use the `import.meta.hot` API for fine-grained control:**

```
if (import.meta.hot) {  
  import.meta.hot.accept(() => {  
    console.log('Module updated!');  
  });  
}
```

# OPTIMIZED PRODUCTION BUILD

## Minify with esbuild

```
build: {  
  minify: 'esbuild',  
}
```

## Custom chunk splitting

```
build: {  
  rollupOptions: {  
    output: {  
      manualChunks(id) {  
        if (id.includes('node_modules')) {  
          return 'vendor';  
        }  
      },  
    },  
  },  
}
```