

## ❏ Node.js Download & Installation Guide

**Node.js** is a JavaScript runtime built on Chrome's V8 engine that allows you to run JavaScript code outside the browser — widely used in backend development.

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### Official Website

👉 Go to the official Node.js download page:

<https://nodejs.org/>

You'll see two versions:

- **LTS (Recommended for most users)** ☒
- **Current (latest features, may be unstable)**

It's best to choose **LTS** for development stability.

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### For Windows Users

#### ☒ Steps:

1. Visit: <https://nodejs.org/>
2. Click on "**Windows Installer (.msi)**" under LTS version.
3. The .msi installer file will start downloading.

#### Installation Process:

1. Double-click the downloaded .msi file.
  2. Click **Next** → Accept license agreement → **Next**.
  3. Choose install location (default is fine) → **Next**.
  4. Select default features (all checked by default) → **Next**.
  5. Click **Install**, then **Finish** once done.
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#### ☒ Verify Installation:

Open **Command Prompt** and run:

```
bash
```

```
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```

```
node -v
```

```
npm -v
```

You should see version numbers for both Node.js and npm (Node Package Manager).

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## For macOS Users

### Steps:

1. Go to: <https://nodejs.org/>
2. Click on "**macOS Installer (.pkg)**" under the LTS version.
3. Open the .pkg file once downloaded.

### Installation:

1. Follow the installation wizard (click **Continue**, then **Install**).
2. You may need to enter your macOS password.
3. Click **Close** when done.

### Verify Installation:

Open **Terminal** and type:

```
bash
```

```
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```

```
node -v
```

```
npm -v
```

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## Alternative (via Homebrew):

If you use Homebrew:

```
bash
```

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brew install node

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## For Linux Users

### ✓ Option 1: Install via NodeSource (Recommended for Ubuntu/Debian)

**Run in terminal:**

bash

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```
curl -fsSL https://deb.nodesource.com/setup_lts.x | sudo -E bash -
```

```
sudo apt-get install -y nodejs
```

It installs both Node.js and npm.

### ✓ Option 2: Using apt (older versions)

bash

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```
sudo apt update
```

```
sudo apt install nodejs npm
```

### ✓ Verify Installation:

bash

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```
node -v
```

```
npm -v
```

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## Bonus: Install n (Node Version Manager)

To switch between multiple Node.js versions easily:

bash

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```
sudo npm install -g n
```

Then:

```
bash
```

```
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```

```
sudo n lts # Install latest LTS
```

```
sudo n latest # Install latest version
```

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## Create Your First Node.js File

1. Create a file named app.js:

```
js
```

```
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```

```
console.log("Hello from Node.js!");
```

2. Run it in terminal:

```
bash
```

```
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```

```
node app.js
```

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## Useful npm Commands

- Install a package:  
`npm install <package-name>`
- Global install:  
`npm install -g <package-name>`
- Initialize a project:  
`npm init`
- Initialize with defaults:  
`npm init -y`

## □ Step-by-Step: Add Node.js to PATH in Windows (In case of Windows User)

### ✓ Step 1: Find Node.js Installation Path

By default, Node.js is installed at:

makefile

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C:\Program Files\nodejs\

Inside this folder, you'll find:

- node.exe (Node.js)
  - npm.cmd (Node Package Manager)
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### ✓ Step 2: Copy the Path

1. Open **File Explorer**.
2. Go to:



makefile

CopyEdit

C:\Program Files\nodejs\

3. Copy this path from the address bar.
- 

### ✓ Step 3: Open Environment Variables

1. Press **Windows + S**, search for "**Environment Variables**", and click:  "**Edit the system environment variables**".
  2. In the **System Properties** window, click:  "**Environment Variables...**" at the bottom.
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### ✓ Step 4: Add Node.js to PATH

1. Under **System variables**, scroll and find **Path**.

2. Select it and click **Edit**.
3. Click **New** and **paste the path**:

makefile

CopyEdit

C:\Program Files\nodejs\

4. Click **OK** on all windows to save and close.

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### ✓ **Step 5: Verify in Command Prompt**

1. Open a **new Command Prompt** window (very important to reopen).
2. Run:

bash

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node -v

npm -v

✓ If Node.js and npm versions show up, you're all set!

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### ⚠ **Still Not Working?**

- Restart your PC if it still doesn't work.
- Make sure there's no typo in the path.
- Ensure you're using a **new terminal** after editing environment variables.