

React Apps





React

- **What is React?**
 - A JavaScript library for building user interfaces
 - Originally developed by Facebook in 2011, open-sourced in 2013
 - Designed for building fast, interactive web apps
- **Why do people like it?**
 - Component-based architecture → Reusable, modular code
 - Virtual DOM → Fast updates & rendering
 - Strong ecosystem → Hooks, Next.js, React Native, etc.
 - Backed by Meta + massive developer community
- **Where is React used?**
 - Facebook, Instagram, Netflix, Airbnb, Uber, and thousands of startups

React App Structure

```
my-react-app/  
├─ public/  
│   └─ index.html      ← HTML template loaded by React  
├─ src/  
│   ├─ index.js        ← React entry point, renders App  
│   ├─ App.js          ← Root React component  
│   └─ components/  
│       └─ MyComponent.js ← Example custom component  
└─ package.json        ← Project metadata & dependencies
```

Node.js

- Node.js is a runtime environment that lets you run **JavaScript** on your computer, not just in the browser
- Lets developers use JavaScript for backend servers, command-line tools, and more
- React is built with modern JavaScript tools that require Node.js to work
- Download here: <https://nodejs.org/en/download>
 - Scroll down and choose “prebuilt Node.js”

Creating a React App

1. Create the app by running **npx create-react-app folder-name**
 - Make a folder for the app (my-app in this example)
 - Install a whole bunch of packages and modules (15K!)
 - This step takes a few minutes
2. Start the app
 1. Move terminal into the folder, or in Cursor just open the folder
 2. Run the command **npm start**

```
npx create-react-app my-app  
cd my-app  
npm start
```

Cloning a React App from GitHub

- Clone the repo

```
git clone https://github.com/username/project-name.git  
cd project-name
```

- Download packages listed in package.json

```
npm install
```

- Start the app

```
npm start
```

Node Package Manager (npm)

- The npm command
 - Installs packages from npm registry
 - Runs project scripts

```
npm start
```

- The npm start command
 - Starts the React development server
 - Serves your app at `http://localhost:3000`
 - Compiles your React code
 - Hot Reloading
 - Updates the browser **instantly** when you edit your code
 - No need to refresh the page manually

Execute npm Package (npx)

- **npx — Execute npm Packages**
 - Lets you run a package without installing it globally

```
npx create-react-app my-app
```

- Downloads and runs **create-react-app** temporarily just for that command
 - Avoids clutter on your machine

React Components

- A component is a reusable piece of user interface
- Components are Javascript files (.js)
- React apps are built by combining components like Lego blocks
- Example: this component will produce some nice HTML formatted text that says **This is my custom component!**

```
function MyComponent() {  
  return <p>This is my custom component!</p>;  
}  
  
export default MyComponent;
```

App.js

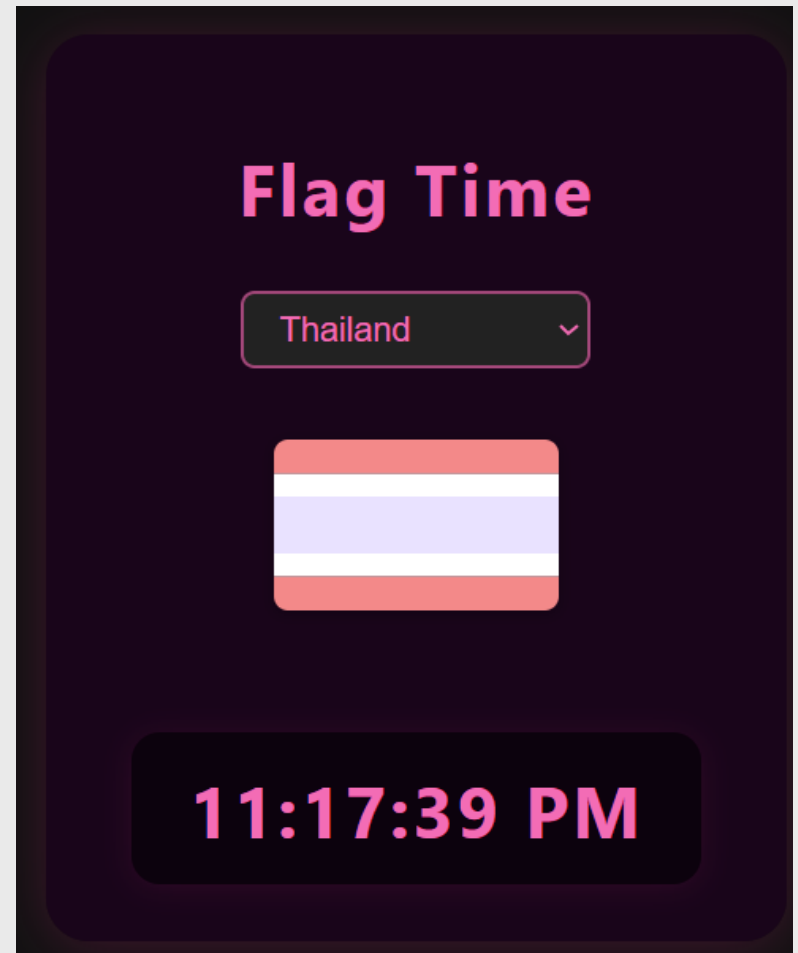
- App.js is the main component that renders everything inside your app
- This component uses other components
- Example – this App.js imports the MyComponent component

```
import MyComponent from './components/MyComponent';

function App() {
  return (
    <div className="App">
      <h1>Hello, world!</h1>
      <MyComponent />
    </div>
  );
}
```

Cooler Example

- React app: flag-time
- BlackPink theme
- Choose a country from a drop-down menu
- App will show the flag of and time in the country



Flag Components

JS ThailandFlag.js > ...

```
import React from 'react';

const ThailandFlag = ({ width = 160, height = 96 }) => (
  <svg width={width} height={height} viewBox="0 0 16 9.6" xmlns="http://www.w3.org/2000/svg">
    /* Red stripe (top) */
    <rect y="0" width="16" height="1.92" fill="#A51931" />
    /* White stripe */
    <rect y="1.92" width="16" height="1.28" fill="#fff" />
    /* Blue stripe (center, double width) */
    <rect y="3.2" width="16" height="3.2" fill="#2D2A4A" />
    /* White stripe */
    <rect y="6.4" width="16" height="1.28" fill="#fff" />
    /* Red stripe (bottom) */
    <rect y="7.68" width="16" height="1.92" fill="#A51931" />
  </svg>
);

export default ThailandFlag;
```



Clock Component

```
JS Clock.js > ...
import React, { useEffect, useState } from 'react';

function getTimeInTimezone(timezone) {
  try {
    return new Date().toLocaleTimeString('en-US', { ti
  } catch {
    return 'Invalid Timezone';
  }
}

const Clock = ({ timezone }) => {
  const [time, setTime] = useState(getTimeInTimezone(t

  useEffect(() => {
    const interval = setInterval(() => {
      setTime(getTimeInTimezone(timezone));
    }, 1000);
    return () => clearInterval(interval);
  }, [timezone]);

  return (
    <div style={{
      color: '#ff69b4',
      fontSize: '2.5rem',
      fontWeight: 'bold'
```

11:17:39 PM

Main App Component

- App.js imports all the components

```
App.js > ...
import React, { useState } from 'react';
import './App.css';
import Clock from './Clock';
import ThailandFlag from './ThailandFlag';
import USFlag from './USFlag';
import GBFlag from './GBFlag';
import JPFlag from './JPFlag';
import BRFlag from './BRFlag';
import INFlag from './INFlag';

const countries = [
  { name: 'United States', code: 'US', flag: 'US', timezone: 'America/New_York' },
  { name: 'United Kingdom', code: 'GB', flag: 'GB', timezone: 'Europe/London' },
  { name: 'Japan', code: 'JP', flag: 'JP', timezone: 'Asia/Tokyo' },
  { name: 'Brazil', code: 'BR', flag: 'BR', timezone: 'America/Sao_Paulo' },
  { name: 'India', code: 'IN', flag: 'IN', timezone: 'Asia/Kolkata' },
  { name: 'Thailand', code: 'TH', flag: 'TH', timezone: 'Asia/Bangkok' },
  // Add more countries as needed
];

function App() {
  const [selectedCountry, setSelectedCountry] = useState(countries[0]);

  return (
    <div className="App app-black-pink">
```

Main App Component

- App.js uses the components
 - Makes code much cleaner

```
function App() {  
  {countryList.map(country => {  
    <CountrySelect country={country} />  
  })}  
  </select>  
  <div style={{ fontSize: '5rem', margin: '1rem', minHeight: '100px' }}>  
    {selectedCountry.code === 'TH' && <ThailandFlag width={160} height={96} />}  
    {selectedCountry.code === 'US' && <USFlag width={160} height={96} />}  
    {selectedCountry.code === 'GB' && <GBFlag width={160} height={96} />}  
    {selectedCountry.code === 'JP' && <JPFlag width={160} height={96} />}  
    {selectedCountry.code === 'BR' && <BRFlag width={160} height={96} />}  
    {selectedCountry.code === 'IN' && <INFlag width={160} height={96} />}  
  </div>  
  { /* Clock component will go here */ }  
  <div style={{ marginTop: '2rem' }}>  
    <Clock timezone={selectedCountry.timezone} />  
  </div>  
</header>  
</div>  
);  
}  
  
export default App;
```

Adding n8n Backends

- **Once we have a nice React front-end built, it is easy to integrate a n8n backend**
- **Just tell the AI you want to send certain data to a webhook, and the webhook will send back data with a certain name. Also mention you will fill in the webhook URL in the code later**

Example n8n Backend

Flag Time

Thailand



Unmute Music

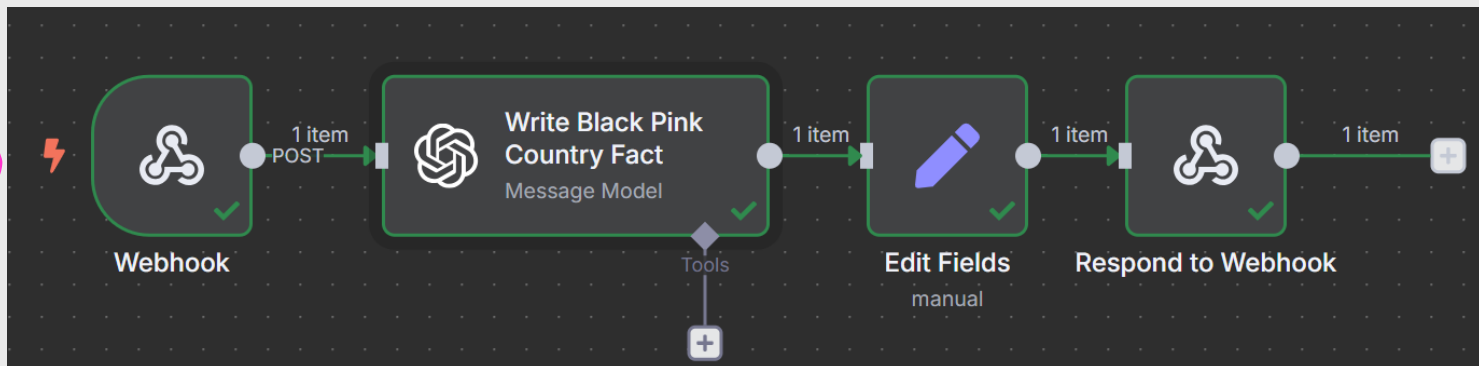
01:21:42 AM

One interesting fact about BLACKPINK and Thailand is that Lisa, one of the group's members, is Thai. Her full name is Lalisa Manoban, and she is the first non-Korean member to debut under the YG Entertainment agency. Lisa has a huge following in Thailand, and she often showcases Thai culture and language, bringing more international attention to her home country.

ข้อน่าสนใจเกี่ยวกับ BLACKPINK และประเทศไทยคือ ลิซ่า สมาชิกคนหนึ่งของวง มีเชื้อชาติไทย ชื่อเต็มของเธอคือลลิษา มโนบาล และเธอเป็นสมาชิกที่ไม่ใช่คนเกาหลีคนแรกที่เดบิวต์ภายใต้สังกัด YG Entertainment ลิซ่ามีผู้ติดตามจำนวนมากในประเทศไทย และเธอมักจะแสดงออกถึงวัฒนธรรมและภาษาของไทย ซึ่งทำให้คนทั่วโลกสนใจประเทศบ้านเกิดของเธอมากขึ้น

Example n8n Backend

```
// Call webhook when country changes
useEffect(() => {
  const fetchWebhookText = async () => {
    setWebhookText(''); // Clear previous text while loading
    try {
      // TODO: Replace with your actual webhook URL
      const webhookUrl = 'https://zlisto.app.n8n.cloud/webhook-test/2a8bd082-37fc-42ec-b8f8-25b6baa4e8e9'; //test
      //const webhookUrl = 'https://zlisto.app.n8n.cloud/webhook/2a8bd082-37fc-42ec-b8f8-25b6baa4e8e9'; //production
      const response = await fetch(webhookUrl, {
        method: 'POST',
        headers: { 'Content-Type': 'application/json' },
        body: JSON.stringify({ country: selectedCountry.name })
      });
      if (!response.ok) throw new Error('Network response was not ok');
      const data = await response.json();
      setWebhookText(data.text || '');
    } catch (error) {
      setWebhookText(''); // Optionally show an error message
    }
  };
  fetchWebhookText();
}, [selectedCountry]);
```




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STYLING APPS

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Styles for App

- We can ask the AI for suggestions for a style for the app

 give me 3 different styles for this app i could use tell me in a table

Here are three different style options you could use for the NeonPulse app, presented in a table format:

Style Name	Description	Color Palette	Typography	Special Effects
Neo-Tokyo	Inspired by Blade Runner and Japanese cyberpunk aesthetics with bright neon contrasts against dark backgrounds	Deep blacks, electric blues, neon pinks, and bright cyans	Futuristic sans-serif fonts with glitch effects	Rain animation effect in background, subtle scanline overlay, kanji characters as decorative elements
Digital Wasteland	Post-apocalyptic tech aesthetic with distressed elements and amber/green terminal vibes	Amber, toxic greens, rusty reds, and muted grays	Monospace terminal fonts, glitchy text rendering	Static/noise effects, occasional "glitches" in the UI, distressed border elements, CRT monitor effect
Corporate Dystopia	Clean, minimal corporate aesthetic with hidden menace, inspired by games like Mirror's Edge	Sterile whites, clinical blues, splashes of red warning colors	Clean sans-serif fonts, corporate logos and iconography	Holographic UI elements, data visualization overlays, subtle surveillance visuals in background

Styling App with Text

- Then we can ask the AI to redo the app in the desired style
- Prompt: redo the app as Neo-Tokyo



ID	TWEET	FAVORITES	VIEWS	ENGAGEMENT
RN-0000	@WilliamShatner Hop in, let's go to Mars!	145	1,155	12.55%
NT-0001	RT @WilliamShatner: Have I ever said anything bad about him? 🤖👉 No matter how murky the present may seem, the future is very bright and I believe Elon Musk represents the future. And no, I'm not going to Mars. 🤖	3,369	93,692	3.60%
KJ-0002	RT @amuse: LAWFARE? Why does every Democrat's family seem to run an NGO? Ashley Biden's NGO got \$250K from Harry and Meghan—right as Harry faced deportation for lying on his visa. He stayed. https://t.co/fvK1xX9scn	5,540	536,997	1.03%
KJ-0003	RT @cb_doge: BREAKING: Grok app is now available to all Android users in the US. https://t.co/ZoWrdQnbO7	4,148	542,648	0.76%
KJ-0004	@AravSrinivas Congrats	429	16,649	2.58%
RN-0005	@nicksortor Tech support always happy to help	2,471	72,000	3.43%
KJ-0006	@waitbutwhy 🤖	404	26,021	1.55%
TK-0007	@levie 🤖	291	16,718	1.74%
RN-0008	@teslaownersSV To be clear, this will affect the price of parts in Tesla cars that come from other countries. The cost impact is not trivial.	1,258	86,461	1.45%

Styling App with Images

make me a react app where i can upload a csv of tweets with columns text, favorite_count, view_count by dragging the file in. make the screen get lighter when i drag in the file, and i want to drag it anywhere on the screen. Then compute engagement = favorite_count/view_count and show the tweets in a table. make the font color get more red and radiant for higher engagement and more dull for lower engagement. give the app a cool name. give it a style like the image here



Claude 3.7 Sonnet



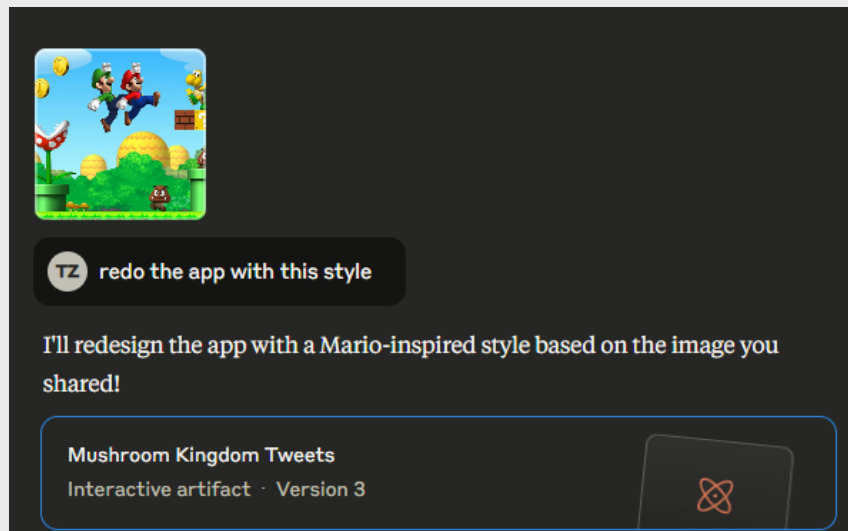
Spirited Tweets

Drag a new CSV file anywhere to load different data

Or select file

Tweet	Favorites	Views
@WesternLensman What a jerk	27,106	132,175
@WilliamShatner Hop in, let's go to Mars!	145	1,155
@MiIMileBattery Hawk tuah man	12,782	112,110
@SpaceChickJen People believe what the legacy media tells them. Unfortunately, propaganda works.	5,894	56,541


Styling App with Images



Mushroom Kingdom Tweets			
Drag a new CSV file anywhere to load different data			
SELECT FILE			
Tweet	Stars	Views	Power
@WesternLensman What a jerk	★ 27,106	132,175	20.508%
@WilliamShatner Hop in, let's go to Mars!	★ 145	1,155	12.554%
@MilMileBattery Hawk tuah man	★ 12,782	112,110	11.401%
@SpaceChickJen People believe what the legacy media tells them. Unfortunately, propaganda works.	★ 5,894	56,541	10.424%
@IfindRetards Jackpot 🎰	★ 10,962	105,256	10.415%
@Noahpinion Don't make me summon @IfindRetards 🙈	★ 76,917	746,705	10.301%
@GarretLewis @SenMarkKelly He is the Senator for Ukraine	★ 3,391	36,440	9.306%

Styling App with Images

Starry Night Tweet Engagement Visualizer ▾



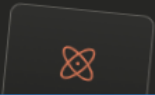
TZ


make me a react app where i can upload a csv of tweets with columns text, favorite_count, view_count by dragging the file in. make the screen get lighter when i drag in the file, and i want to drag it anywhere on the screen. Then compute engagement = favorite_count/view_count and show the tweets in a table. make the font color get more red and radiant for higher engagement and more dull for lower engagement. give the app a cool name and do it in the style of this image



I'll create a React application inspired by the Starry Night painting that lets you upload CSV files of tweets by dragging and dropping. The app will calculate engagement ratios and display tweets with color-coded text based on engagement levels.

StarryTweets: Tweet Engagement Visualizer

Interactive artifact



 </>

  Publish

Copy ▾

>

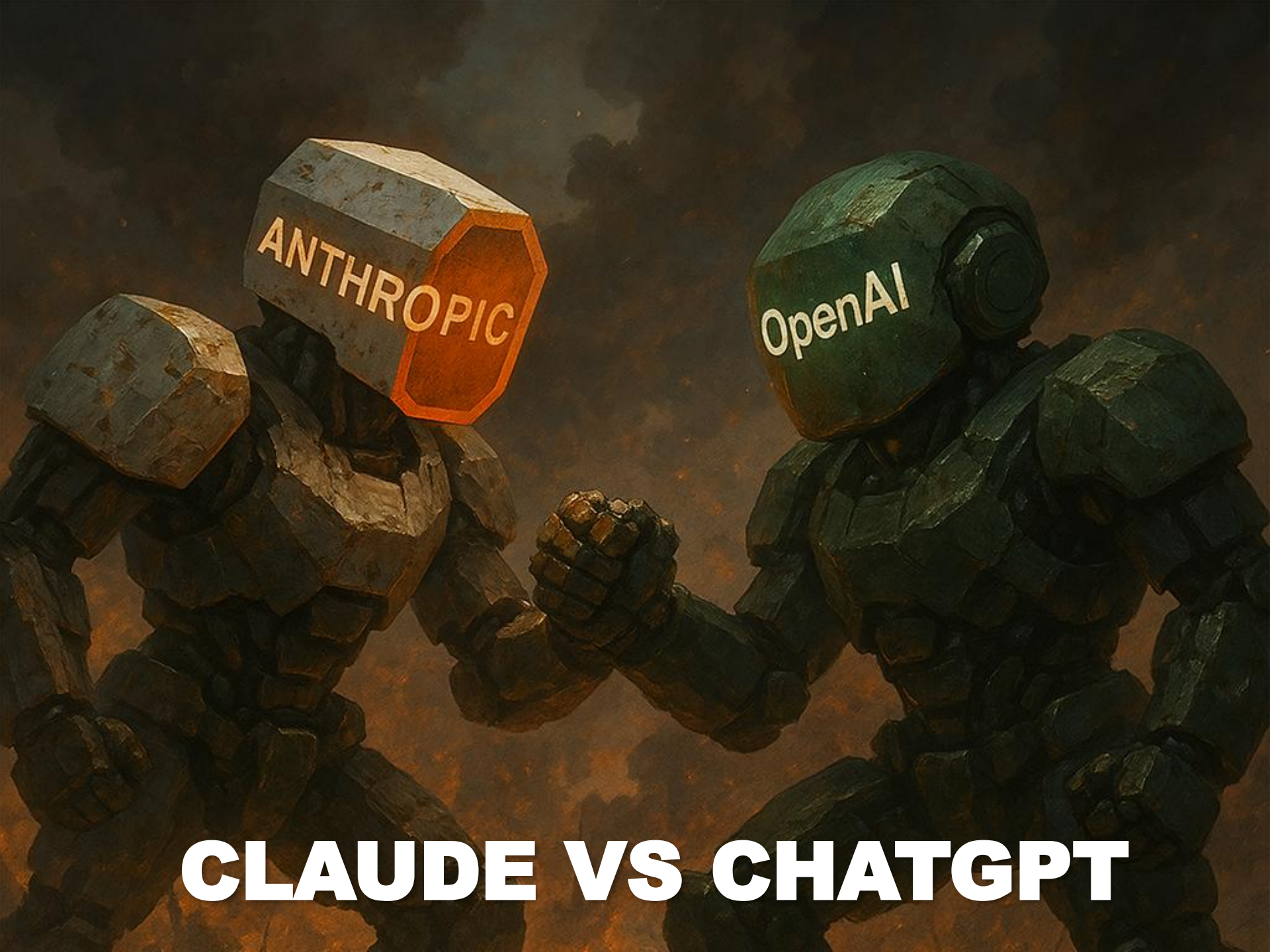
StarryTweets

Visualize tweet engagement in a starry night style

1019 Tweets Analyzed

Reset

Tweet	Favorites	Views	Engage
@WesternLensman What a jerk	27,106	132,175	20.5
@WilliamShatner Hop in, let's go to Mars!	145	1,155	12.5
@MilMileBattery Hawk tuah man	12,782	112,110	11.4
@SpaceChickJen People believe what the legacy media tells them. Unfortunately, propaganda works.	5,894	56,541	10.4



CLAUDE VS CHATGPT

ChatGPT vs Claude

- **Als have different strengths**
- **ChatGPT**
 - **Multimodal functionality – image to text, text to image, speech to text, text to speech, embeddings, RAG, tools**
- **Claude**
 - **Good at writing code**
 - **Very good at designing apps**

Coding

- Prompt: make me a react app where i can upload a csv of tweets with columns text, favorite_count, view_count by dragging the file in. make the screen get lighter when i drag in the file, and i want to drag it anywhere on the screen. Then compute $\text{engagement} = \text{favorite_count} / \text{view_count}$ and show the tweets in a table. make the font color get more red and radiant for higher engagement and more dull for lower engagement. **give the app a style that looks very cyberpunk** and give it a cool name

Coding: Claude vs ChatGPT

ChatGPT


CYBERTWEET: ENGAGE			
Drag and drop a CSV file anywhere on the screen with columns: text, favorite_count, view_count			
Text	Favorites	Views	Engagement
@WilliamShatner Hop in, let's go to Mars!	145	1155	0.126
RT @WilliamShatner: Have I ever said anything bad about h...	3369	93692	0.036
RT @amuse: LAWFARE? Why does every Democrat's family seem...	5540	536997	0.010
RT @cb_doge: BREAKING: Grok app is now available to all A...	4148	542648	0.008
@AravSrinivas Congrats	429	16649	0.026
@nicksortor Tech support always happy to help	2471	72000	0.034
@nickmiller 🤔	404	26821	0.014
@louis 🤔	291	16718	0.007
@WilliamShatner To be clear, this will affect the price of...	1258	88461	0.013
@Sadie_NC 🇺🇸	370	12833	0.030
@tszyl ❤️🔪	484	15143	0.027
@repdarrellissa 🇺🇸	495	15463	0.032
🇺🇸	51750	5556789	0.009
RT @alx: BREAKING: Elon Musk's America PAC announces the ...	6122	1103587	0.006

Claude

NeonPulse // Tweet Engagement Analyzer			
TWEET	FAVORITES	VIEWS	ENGAGEMENT
@WilliamShatner Hop in, let's go to Mars!	145	1,155	12.55%
RT @WilliamShatner: Have I ever said anything bad about him? 🤔🔪 No matter how murky the present may seem, the future is very bright and I believe Elon Musk represents the future. And no, I'm not going to Mars. 🤔	3,369	93,692	3.60%
RT @amuse: LAWFARE? Why does every Democrat's family seem to run an NGO? Ashley Biden's NGO got \$250K from Harry and Meghan—right as Harry faced deportation for lying on his visa. He stayed. https://t.co/fvK1xX9scn	5,540	536,997	1.03%
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@nicksortor Tech support always happy to help	2,471	72,000	3.43%

Styling App with Images

Starry Night Tweet Engagement Visualizer ▾



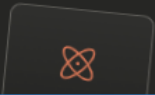
TZ


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StarryTweets: Tweet Engagement Visualizer

Interactive artifact



 </>

  Publish

Copy ▾

>

StarryTweets

Visualize tweet engagement in a starry night style

1019 Tweets Analyzed


Reset

Tweet	Favorites	Views	Engage
@WesternLensman What a jerk	27,106	132,175	20.5
@WilliamShatner Hop in, let's go to Mars!	145	1,155	12.5
@MilMileBattery Hawk tuah man	12,782	112,110	11.4
@SpaceChickJen People believe what the legacy media tells them. Unfortunately, propaganda works.	5,894	56,541	10.4

Styling App with Images: ChatGPT vs Claude

ChatGPT

RadiantEngage



Drag and drop a CSV file of tweets anywhere on the screen to analyze engagement

Text	Favorite Count
@WilliamShatner Hop in, let's go to Mars!	145
RT @WilliamShatner: Have I ever said anything bad about him? 🤔 👉 No matter how murky the present may seem, the future is very bright and I believe Elon Musk represents the future. And no, I'm not going to Mars. 🤔	3369
RT @amuse: LAWFARE? Why does every Democrat's family seem to run an NGO? Ashley	

Claude

StarryTweets

Visualize tweet engagement in a starry night style

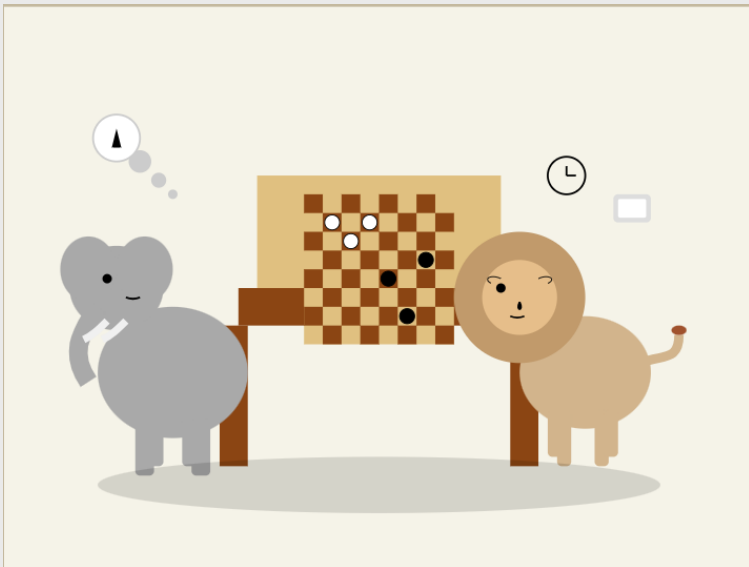
1019 Tweets Analyzed [Reset](#)

Tweet	Favorites	Views	Engage
@WesternLensman What a jerk	27,106	132,175	20.5
@WilliamShatner Hop in, let's go to Mars!	145	1,155	12.5
@MilMileBattery Hawk tuah man	12,782	112,110	11.4
@SpaceChickJen People believe what the legacy media tells them. Unfortunately, propaganda works.	5,894	56,541	10.4
@IfindRetards Jackpot 🎰	10,962	105,256	10.4

Image Generation

- Prompt: draw me a elephant playing chess with a lion

Claude



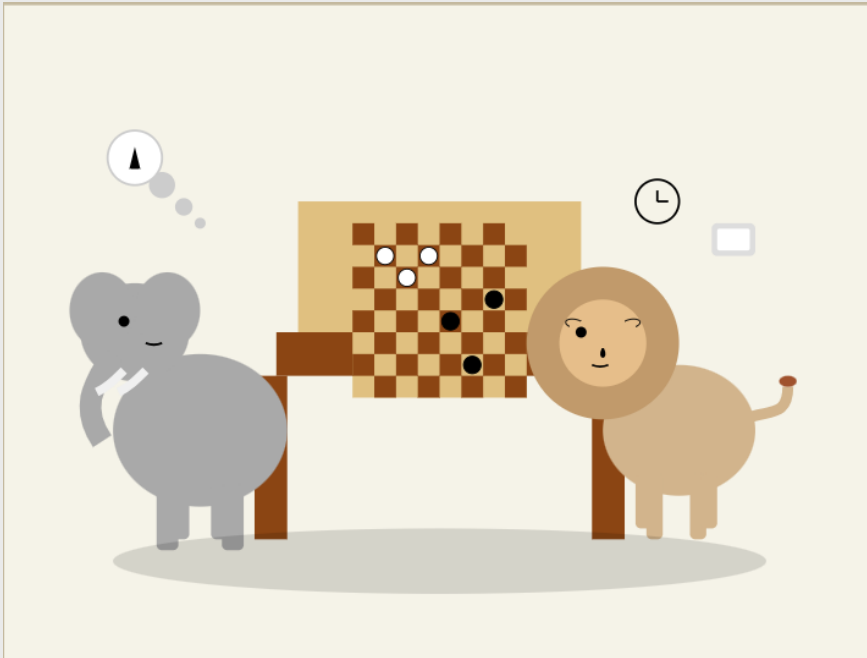
ChatGPT



Claude Image Code

- Claude cannot generate an image with a model. Instead, it writes code to physically draw the image

Image



Code

```
<!-- Eyes -->
<circle cx="110" cy="290" r="5" fill="#000"/>

<!-- Thinking expression -->
<path d="M 130 310 C 135 312, 140 312, 145 310" stroke="#000" stroke-width="2" fill="none"/>
</g>

<!-- Lion (right) -->
<g>
  <!-- Body -->
  <ellipse cx="620" cy="390" rx="70" ry="60" fill="#d2b48c"/>

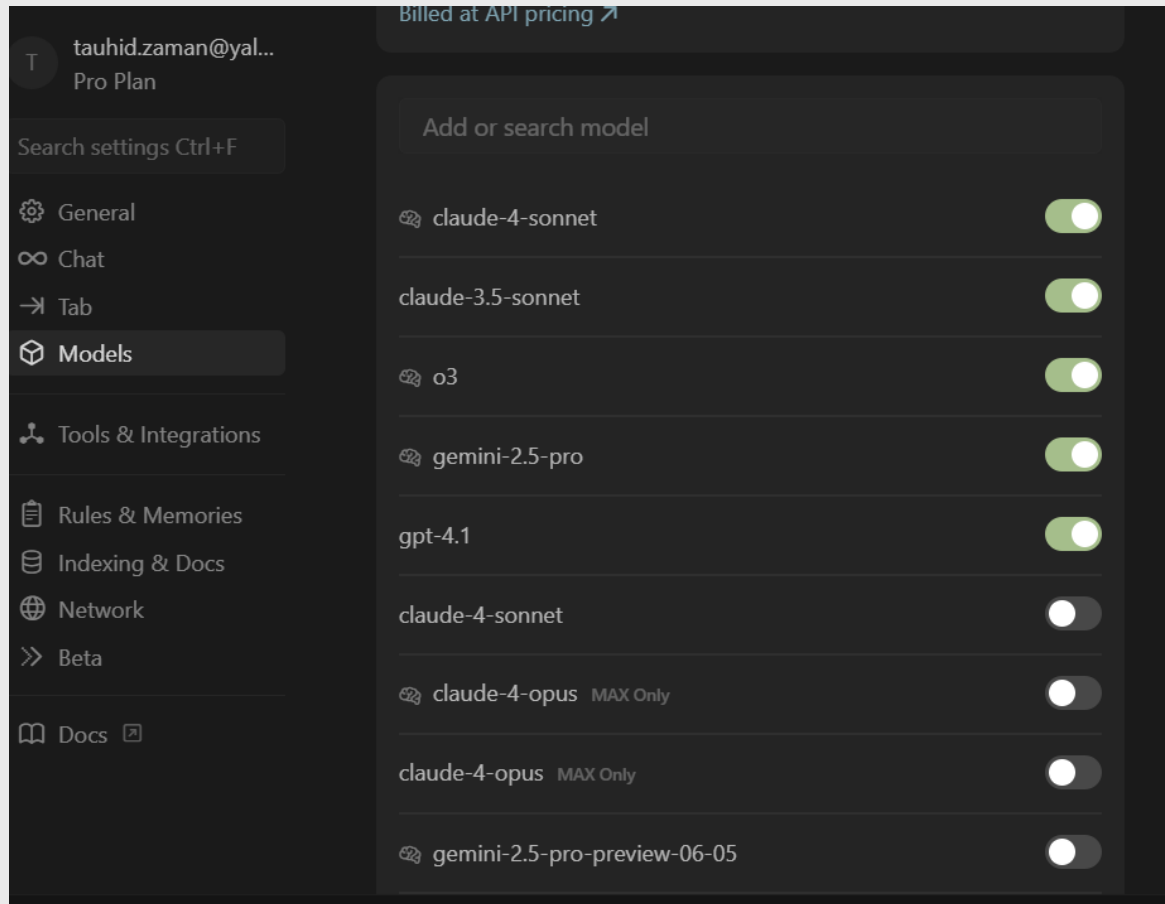
  <!-- Mane -->
  <circle cx="550" cy="310" r="70" fill="#c19a6b"/>

  <!-- Head -->
  <circle cx="550" cy="310" r="40" fill="#e6be8a"/>

  <!-- Face details -->
  <circle cx="530" cy="300" r="5" fill="#000"/>
  <path d="M 550 315 C 545 325, 555 325, 550 315" stroke="#000" stroke-width="2" fill="#000"/>
  <path d="M 530 290 C 520 285, 510 290, 520 295" stroke="#000" stroke-width="1" fill="none"/>
  <path d="M 570 290 C 580 285, 590 290, 580 295" stroke="#000" stroke-width="1" fill="none"/>
</g>
```


Cursor

- You can pick multiple LLM models in Cursor
- Cursor seems to have the web design abilities of Claude
- We still might want to consult Claude for some designs, or to preview the app



Coding Session

- **We will build a simple React app**
 - Choose country from drop-down menu
 - Show local time in country
 - Show the country's flag (make it a component)
- **We will try to make the style look cool**
 - Give it a Black Pink vibe
- **We will add a n8n AI powered backend**
 - Send the country to a webhook and it will return text. Show the text below the clock
- **We will iteratively add new features**
 - Make it play that Diplo Black Pink beat when choosing Thailand