

# Redux and RTK Query

BAF675 금융 빅데이터 분석

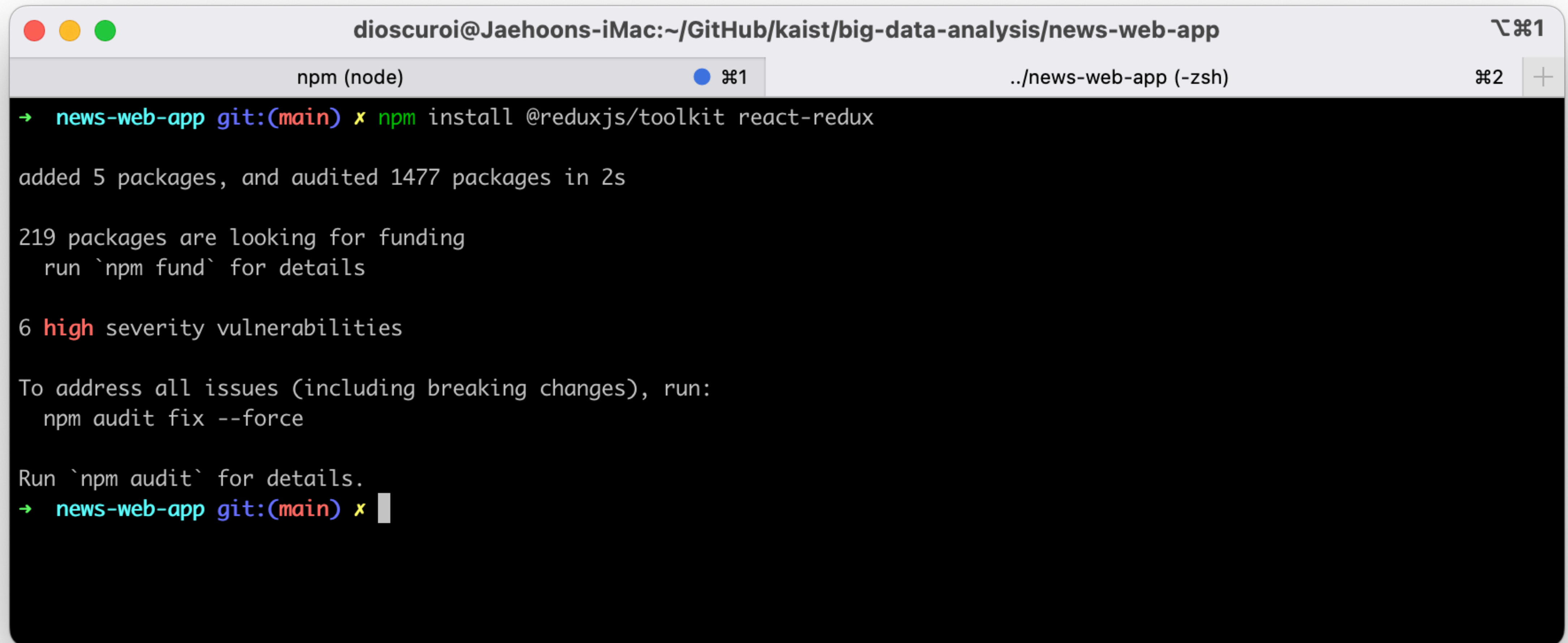
이재훈, Week 14

# What is Redux?

- “Redux is an open-source JavaScript library for managing and centralizing application state. It is most commonly used with libraries such as React or Angular for building user interfaces. Similar to Facebook's Flux architecture, it was created by Dan Abramov and Andrew Clark.”
- Useful to manage “states” across components.

# Redux Toolkit 설치하기

- `npm install @reduxjs/toolkit react-redux`



A screenshot of a macOS terminal window. The title bar shows the user 'dioscuroi' on a 'Jaehoons-iMac' in the directory '~/GitHub/kaist/big-data-analysis/news-web-app'. The terminal has two tabs: 'npm (node)' (active) and '../news-web-app (-zsh)'. The command `npm install @reduxjs/toolkit react-redux` has been executed. The output shows that 5 packages were added and 1477 packages were audited in 2 seconds. It also mentions that 219 packages are looking for funding and that there are 6 high severity vulnerabilities. The terminal ends with the prompt `news-web-app git:(main) x` and a cursor.

```
dioscuroi@Jaehoons-iMac:~/GitHub/kaist/big-data-analysis/news-web-app
npm (node) 1
../news-web-app (-zsh) 2 +
→ news-web-app git:(main) x npm install @reduxjs/toolkit react-redux

added 5 packages, and audited 1477 packages in 2s

219 packages are looking for funding
  run `npm fund` for details

6 high severity vulnerabilities

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.
→ news-web-app git:(main) x
```

# Redux 기본 설정

- src/app 폴더 만들어서 다음 파일 생성하기
  - hooks.ts
  - newsApi.ts
  - store.ts

# Redux 기본 설정

- src/index.tsx 업데이트
  - add Provider and store

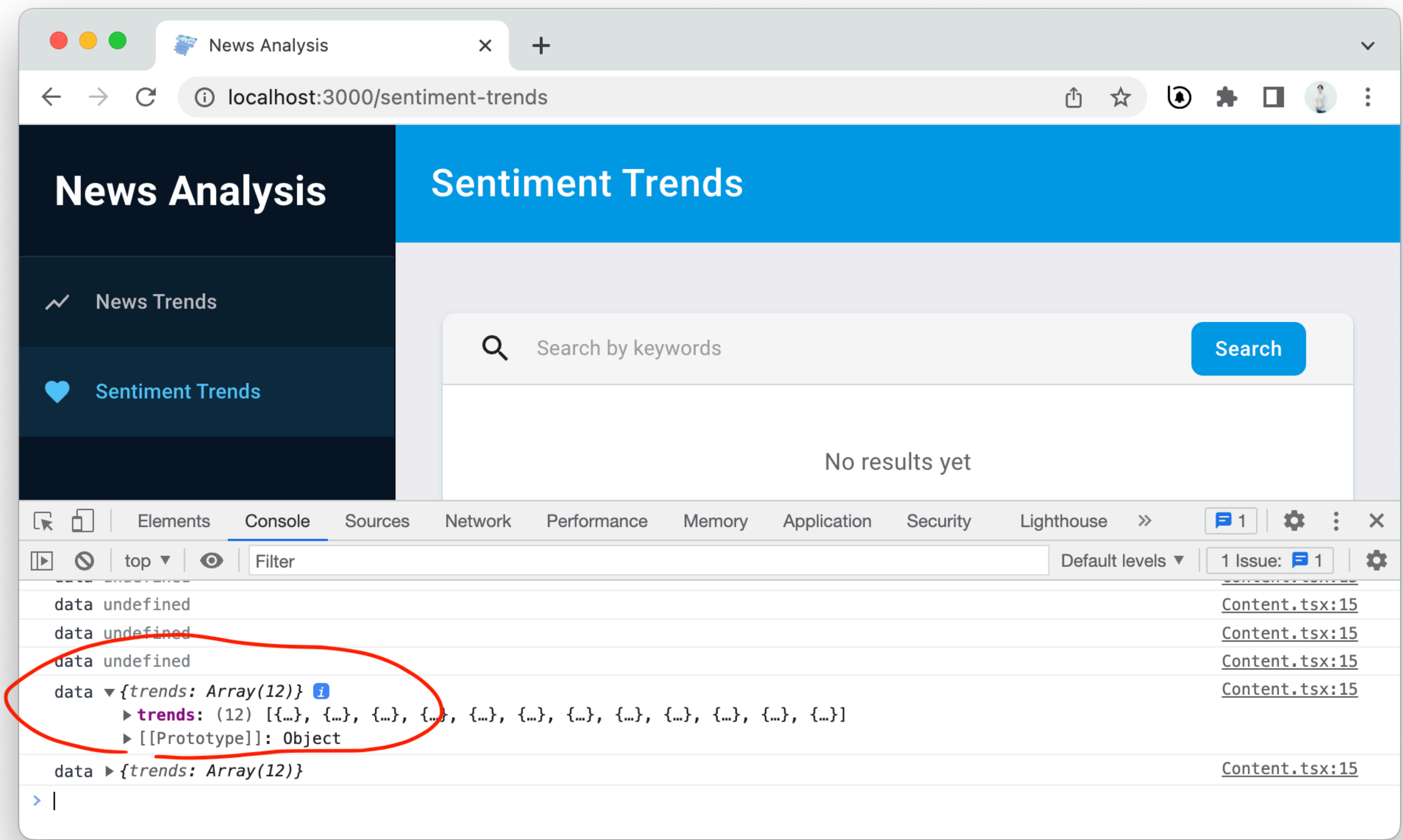
```
7   import React from "react";
8   import ReactDOM from "react-dom/client";
9   import { Provider } from "react-redux";
10  import { BrowserRouter } from "react-router-dom";
11
12  import App from "./App";
13  import { store } from "./app/store";
14
15  const root = ReactDOM.createRoot(document.getElementById("root") as HTMLElement);
16  root.render(
17    <React.StrictMode>
18      <Provider store={store}>
19        <BrowserRouter>
20          <App />
21        </BrowserRouter>
22      </Provider>
23    </React.StrictMode>,
24  );
```

# News Trends 요청하기

- src/app/newsApi.ts - query 추가
- src/app/Content.tsx - 요청 보내고 결과 출력하기

```
12 export default function Content() {  
13   const { data } = useGetNewsTrendsQuery();  
14  
15   console.log("data", data);  
16 }
```

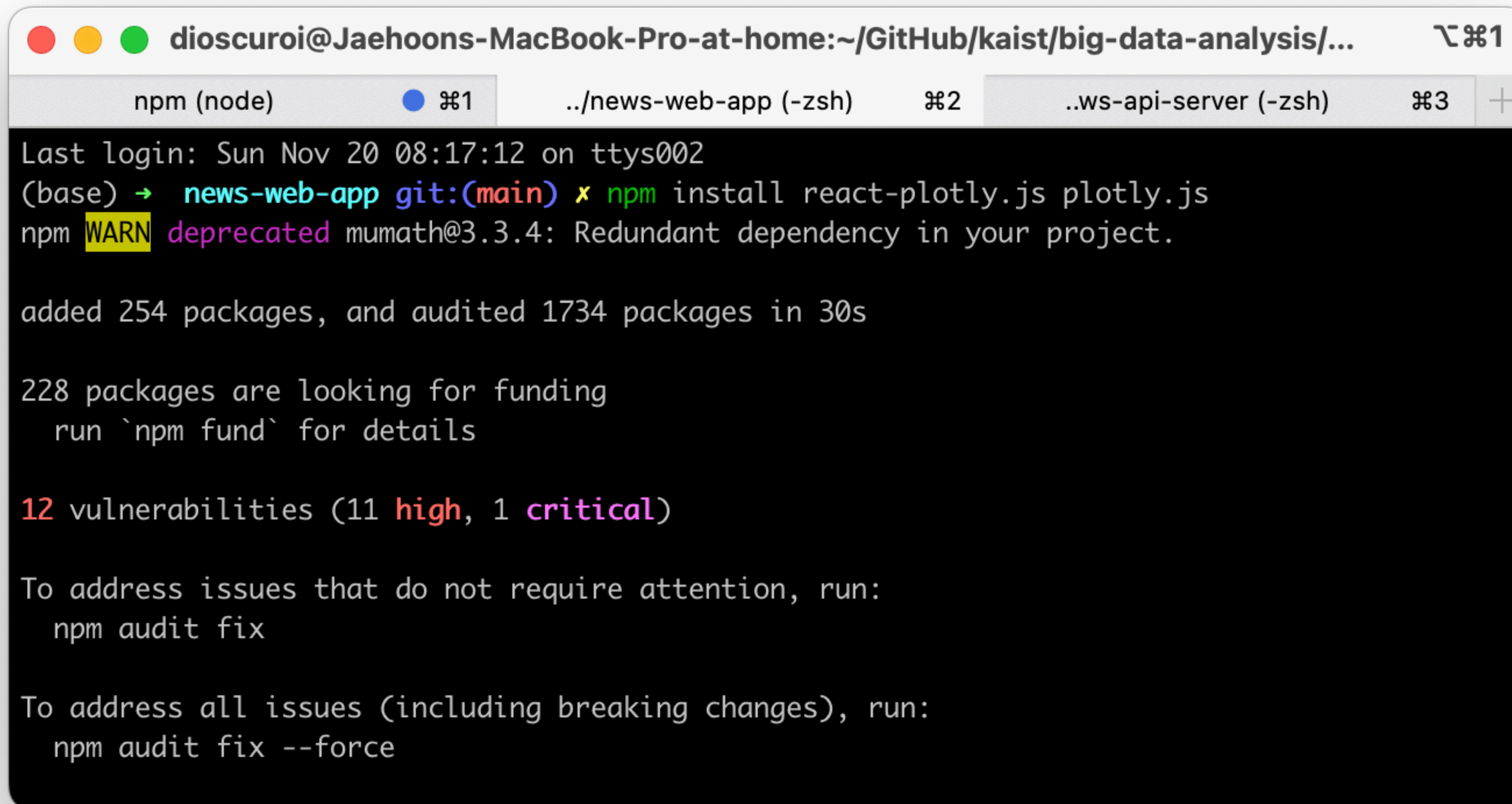
# News Trends 요청하기





# News Trends 차트 그리기

- `npm install plotly.js react-plotly.js @types/react-plotly.js`

A screenshot of a macOS terminal window. The title bar shows the user 'dioscuroi' on a MacBook Pro. The terminal has three tabs: 'npm (node)', '../news-web-app (-zsh)', and '..ws-api-server (-zsh)'. The active tab is 'npm (node)'. The terminal output shows the command 'npm install react-plotly.js plotly.js' being executed. It displays a warning about a deprecated dependency 'mumath@3.3.4', the number of packages added and audited, and the results of an npm audit showing 12 vulnerabilities (11 high, 1 critical). It also provides instructions on how to address these issues using 'npm audit fix' and 'npm audit fix --force'.

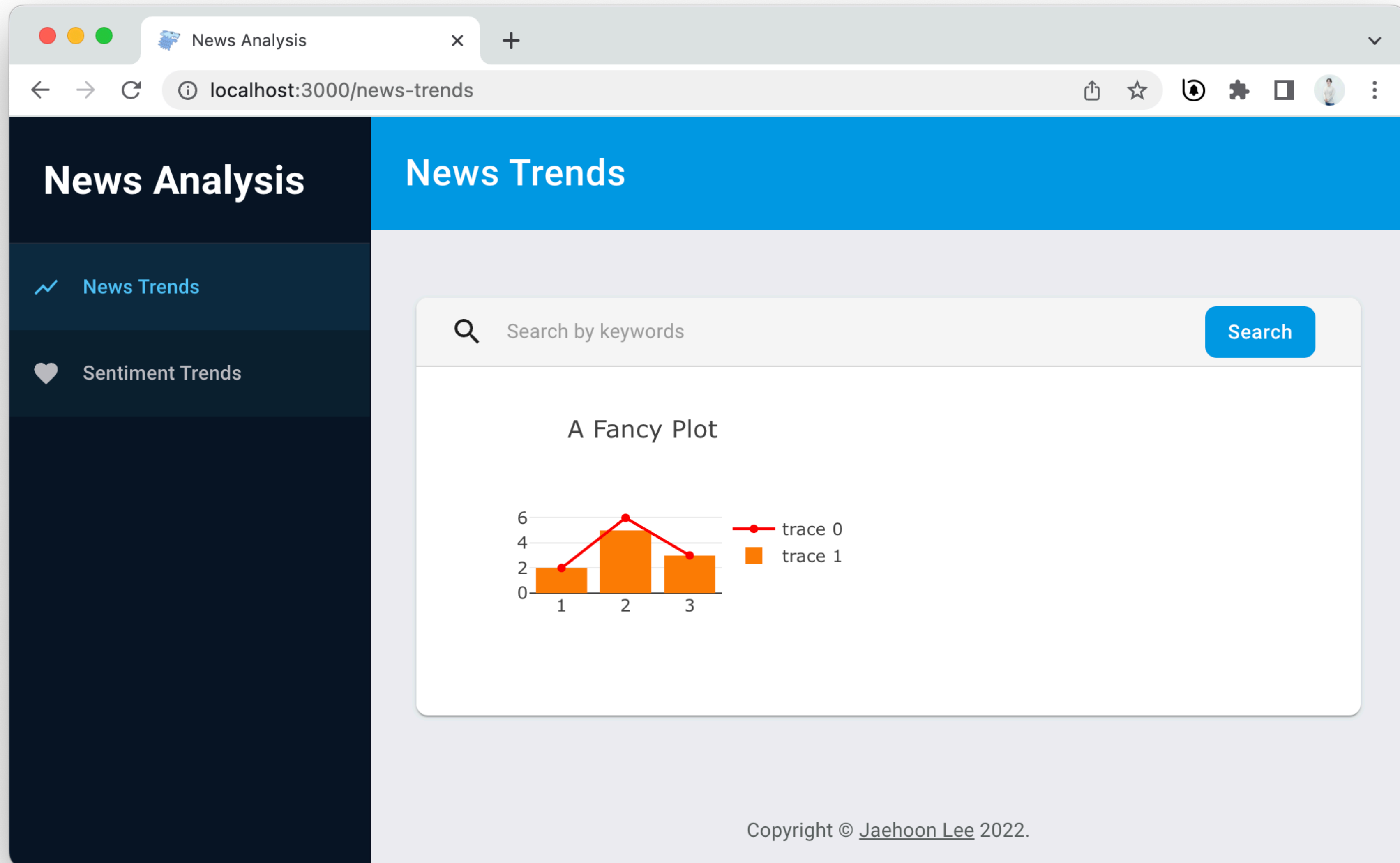
```
dioscuroi@Jaehoons-MacBook-Pro-at-home:~/GitHub/kaist/big-data-analysis/...  
npm (node) 1  
../news-web-app (-zsh) 2  
..ws-api-server (-zsh) 3  
Last login: Sun Nov 20 08:17:12 on ttys002  
(base) → news-web-app git:(main) x npm install react-plotly.js plotly.js  
npm WARN deprecated mumath@3.3.4: Redundant dependency in your project.  
  
added 254 packages, and audited 1734 packages in 30s  
  
228 packages are looking for funding  
  run `npm fund` for details  
  
12 vulnerabilities (11 high, 1 critical)  
  
To address issues that do not require attention, run:  
  npm audit fix  
  
To address all issues (including breaking changes), run:  
  npm audit fix --force
```



# News Trends 차트 그리기

- src/components/NewsTrendChart.tsx 생성
  - API query 옮겨놓기
  - Content.tsx 에서 import
  - 아래 경로에서 sample code 복사하기
    - <https://plotly.com/javascript/react/>

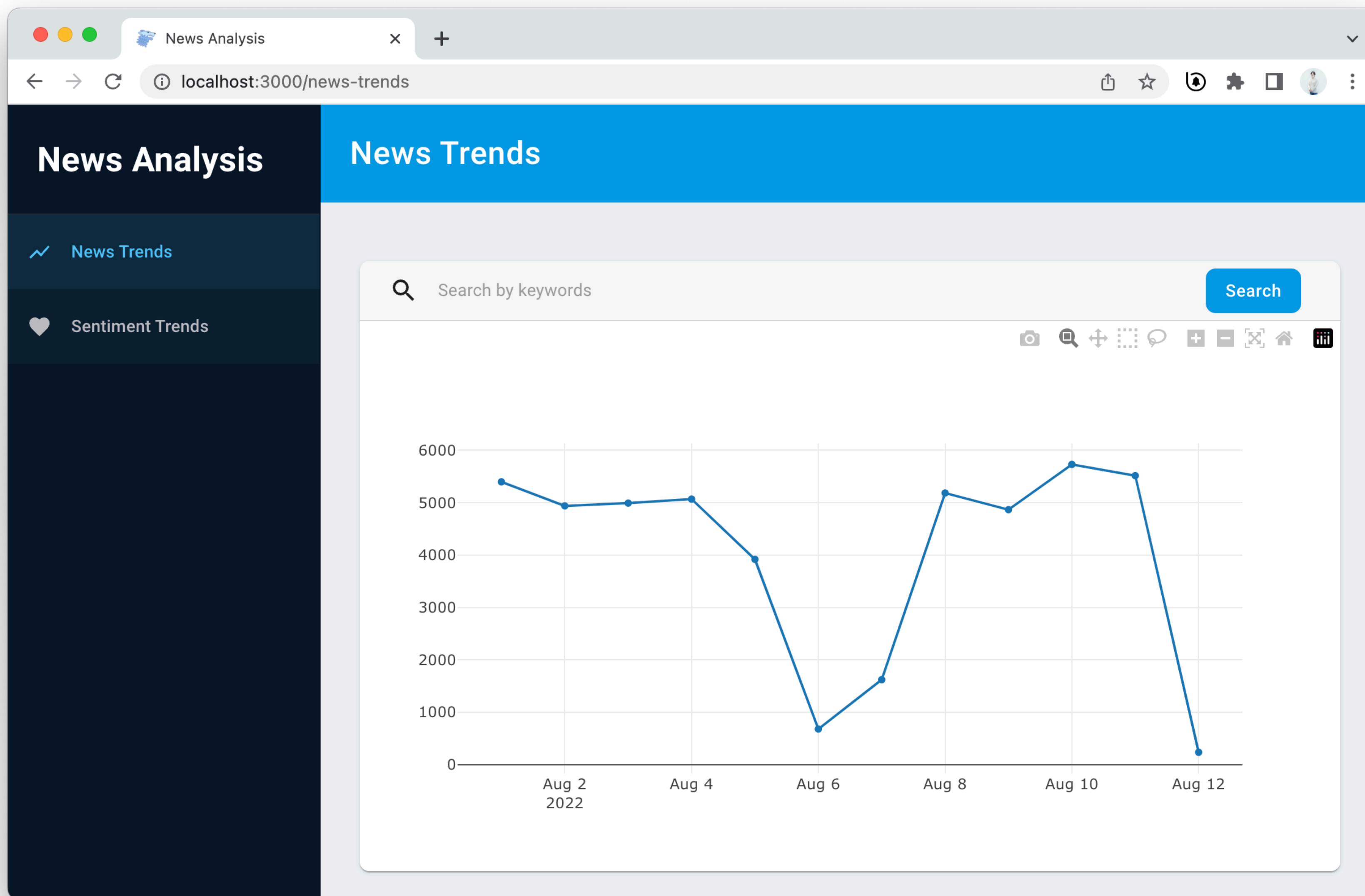
# News Trends 차트 그리기



# News Trends 차트 그리기

- src/components/NewsTrendChart.tsx 생성
  - 로딩 중 CircularProgress 표시하기
  - 로딩 완료 후 차트 그리기

# News Trends 차트 그리기



# 검색어 적용하기

- Content.tsx
  - state variable 추가하기
  - TextField - onChange, onKeyDown handlers
  - Button - onClick handler
- NewsTrendsChart.tsx
  - add “search” keywords to props



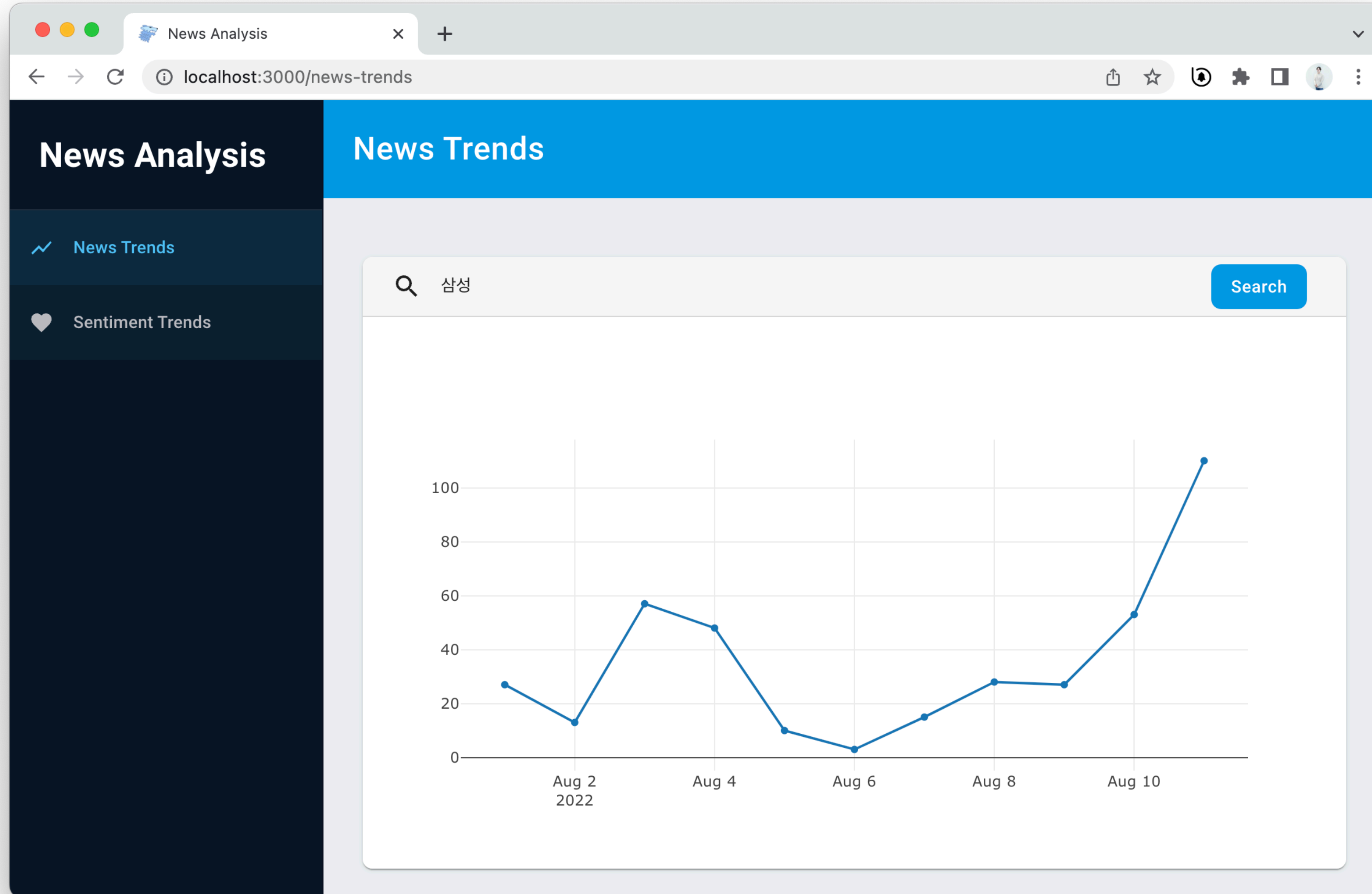
# 검색어 적용하기

- types.ts
  - Request params 타입 선언
- newsApi.ts
  - search 키워드 넣고 API 요청

# 검색어 적용하기

- Serverless API
  - 에러 나는 것 확인 후 수정
  - news\_trends.py, sentiment\_trends.py

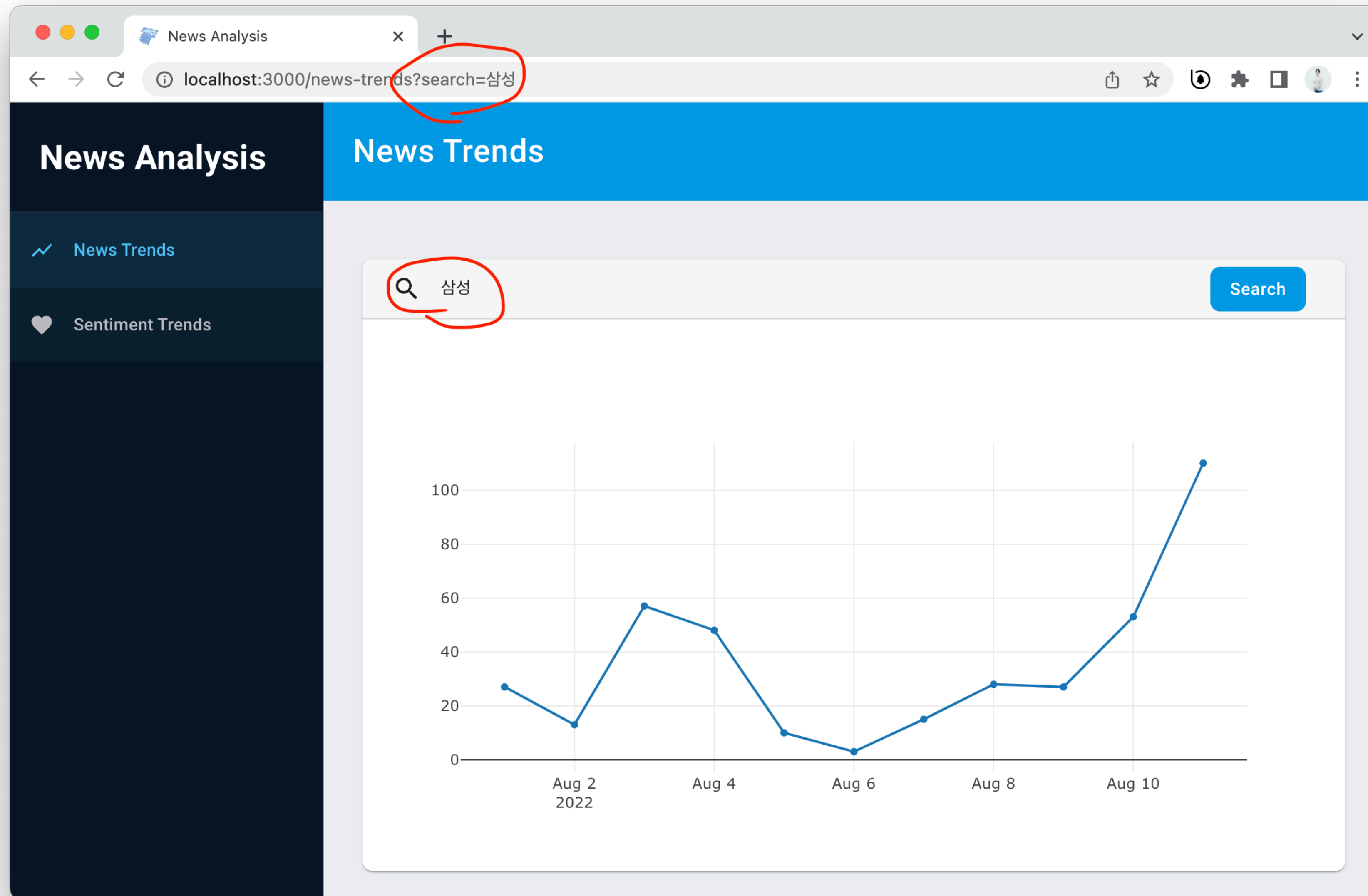
# 검색어 적용하기



# 검색 키워드를 URL Parameter 로 옮기기

- Content.tsx
  - navigate 이용
- NewsTrendChart.tsx
  - useLocation
  - URLSearchParams

# 검색 키워드를 URL Parameter 로 옮기기





# Sentiment Trends 차트 그리기

- types.ts
  - Sentiment trends 결과값 타입 선언
- newsApi.ts
  - Sentiment trends 요청하는 API query 추가

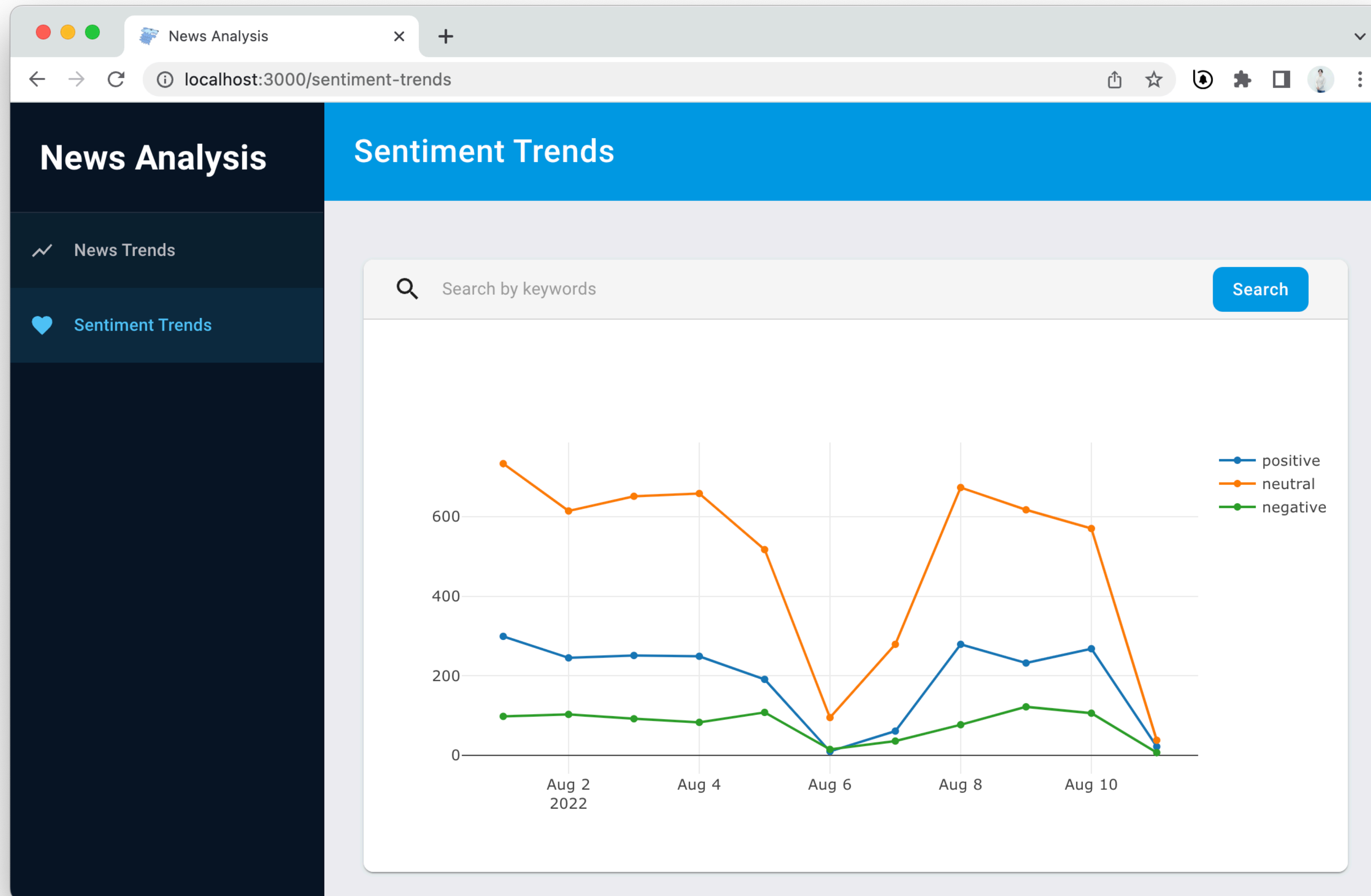
# Sentiment Trends 차트 그리기

- SentimentTrendChart.tsx
  - NewsTrendChart.tsx 를 복사해서 생성
- Content.tsx
  - pathname 에 따라 SentimentTrendChart 표시
  - onSearch event handler 변경

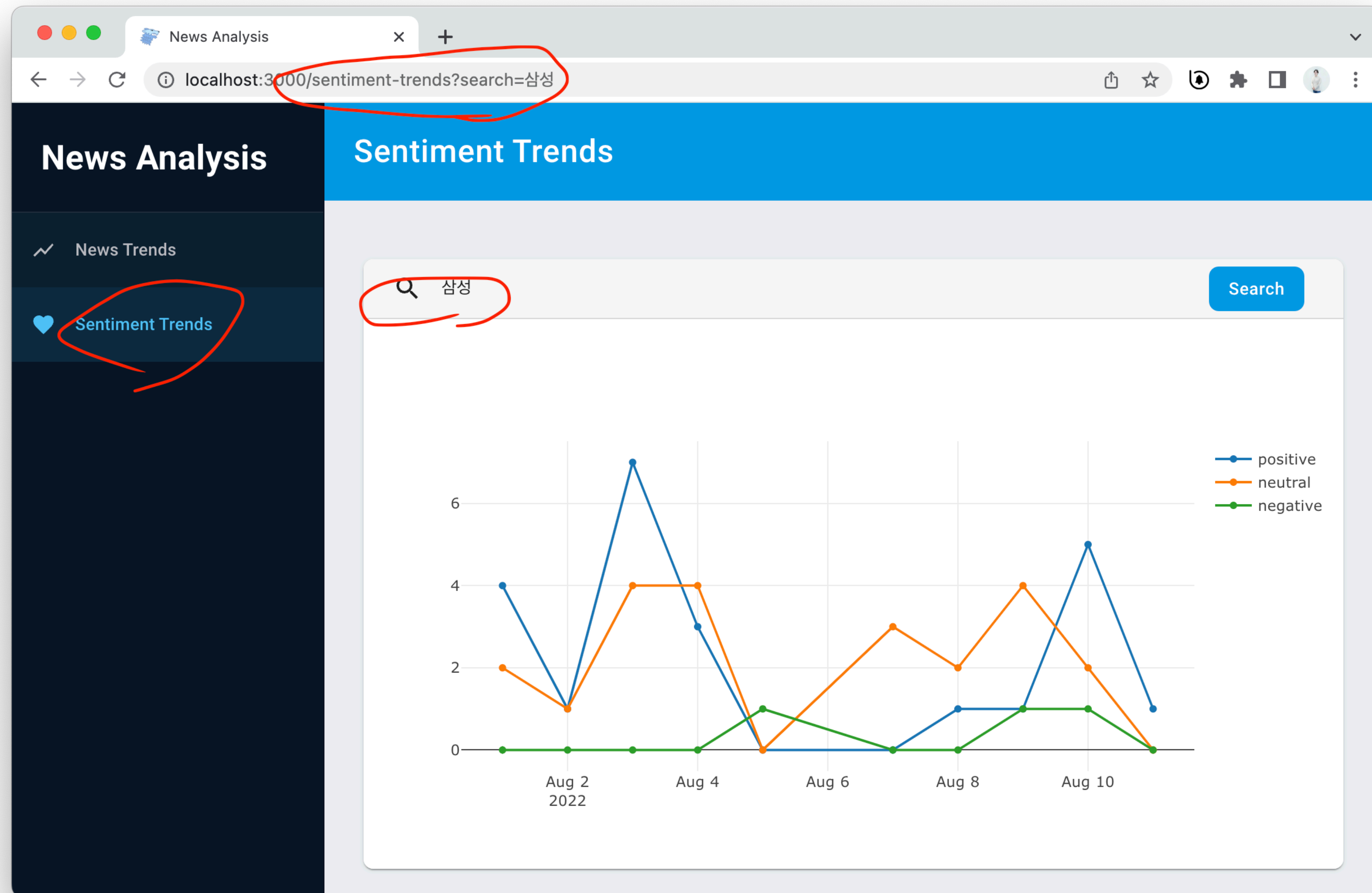
# Sentiment Trends 차트 그리기

- SentimentTrendChart.tsx
  - getSentimentTrends 로 api query 변경
  - sentiment 에 따라 trace 생성

# Sentiment Trends 차트 그리기



# Sentiment Trends 차트 그리기

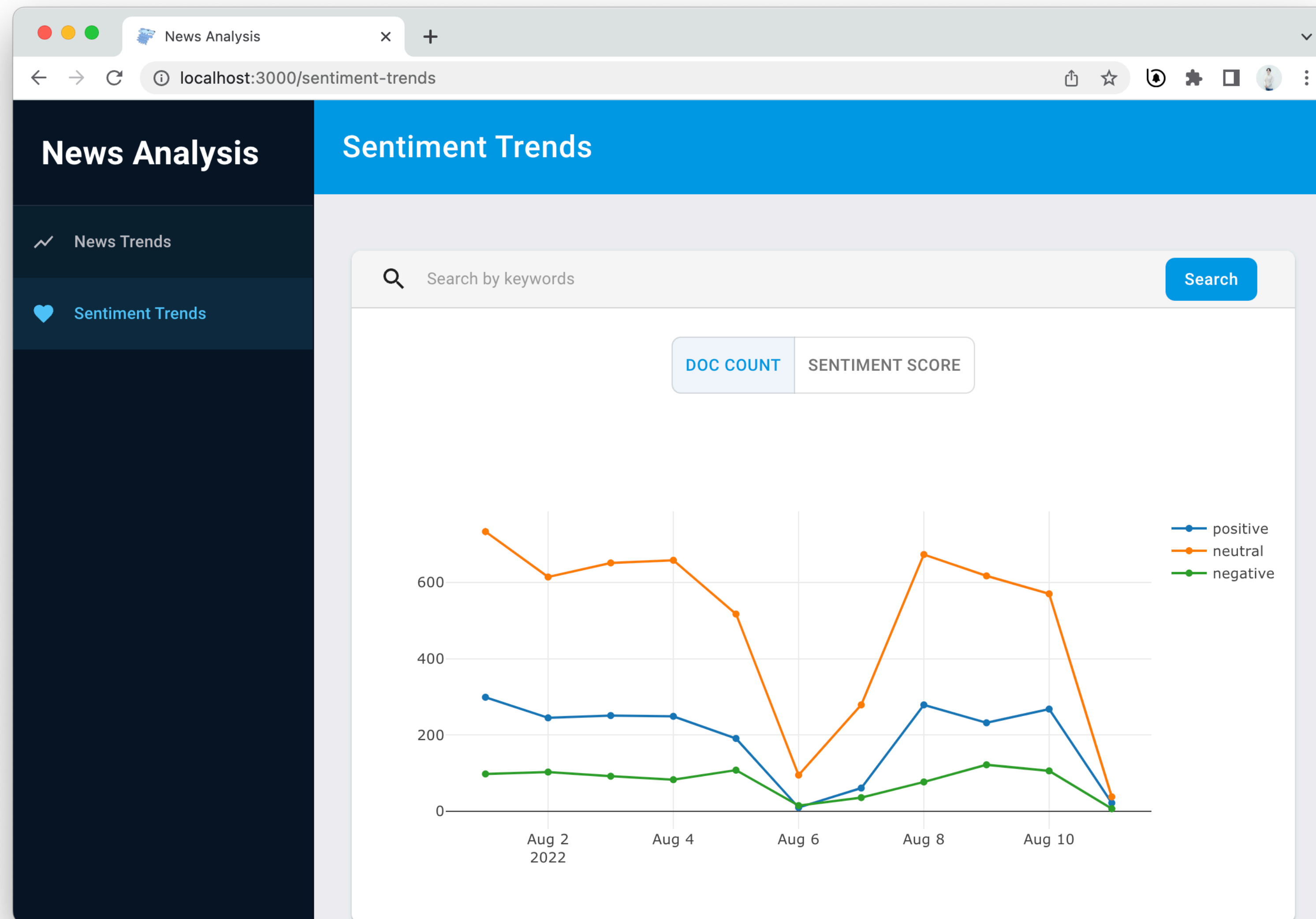




# Doc Count vs Score 선택하기

- SentimentTrendChart.tsx
  - ToggleButtonGroup 추가
  - State variable 추가
  - Traces 생성하는 함수 추가

# Doc Count vs Score 선택하기



# Doc Count vs Score 선택하기

