

Fullstack Engineer / Technical Assignment

Task Description:

We run a service which delivers bubble tea by drone, and we want an application to understand where and when customers ordered a drink to improve our operations. Attached is a CSV that contains all of our orders on 1 July 2025:

- Each row of the CSV represents one order.
- Each order is associated with one customer Id (1-10)
- Each order has a unique time on that date
- Each order has an associated latitude and longitude

Acceptance Criteria:

1. Make the data in the CSV available to use in a React app
2. Create a React app which displays the data on a map
3. The app should allow us to see only a single customer's order on the map, or all customers' orders
4. The app should allow us to select an arbitrary time range and only see those orders on the map
5. Propose improvements to this application.

Please make this data available to your app in any way you see fit, programmatically. Feel free to have a separate script which transforms the CSV into a JSON file; the script should be included in your solution, along with instructions on how to run it. It may be in any programming language, but Javascript, Python or Golang are preferred.

We respect your time, and expect this exercise to take no more than 2 hours. Please tailor your solution accordingly.

The most important thing is to show how you think about this problem and your solution.

If you used a coding assistant while completing this exercise, please document your prompts and describe how you diverged from its output.

Boilerplate and suggestions:

We do not expect all candidates to be familiar with map and date libraries. If you are, please feel free to use your preferred options. Below are reasonable starting points:

- The date-fns library provides the simple functions [isBefore\(a,b\)](#) and [isAfter\(a,b\)](#) which return true if a is before (or after) b. They accept datetime strings like those in the CSV
- The [datetime-local](#) input type provides a basic input for selecting a date and time
- A basic react-leaflet app showing the region of our data looks like this:

```
import { MapContainer, TileLayer, Marker } from "react-leaflet";
```

```
import "../styles.css";

export default function App() {
  return (
    <div className="Map">
      <MapContainer center={[52.5127761, 13.3391605]} zoom={15}>
        <TileLayer
          url="https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png"
          attribution='&copy; <a
href="http://osm.org/copyright">OpenStreetMap</a> contributors'
        />
      </MapContainer>
    </div>
  );
}
```

React-leaflet requires a container with some dimensions to render; this styles.css file would provide that:

```
.Map {
  height: 300px;
  width: 90vw;
}

.leaflet-container {
  height: 100%;
  width: 100%;
}
```