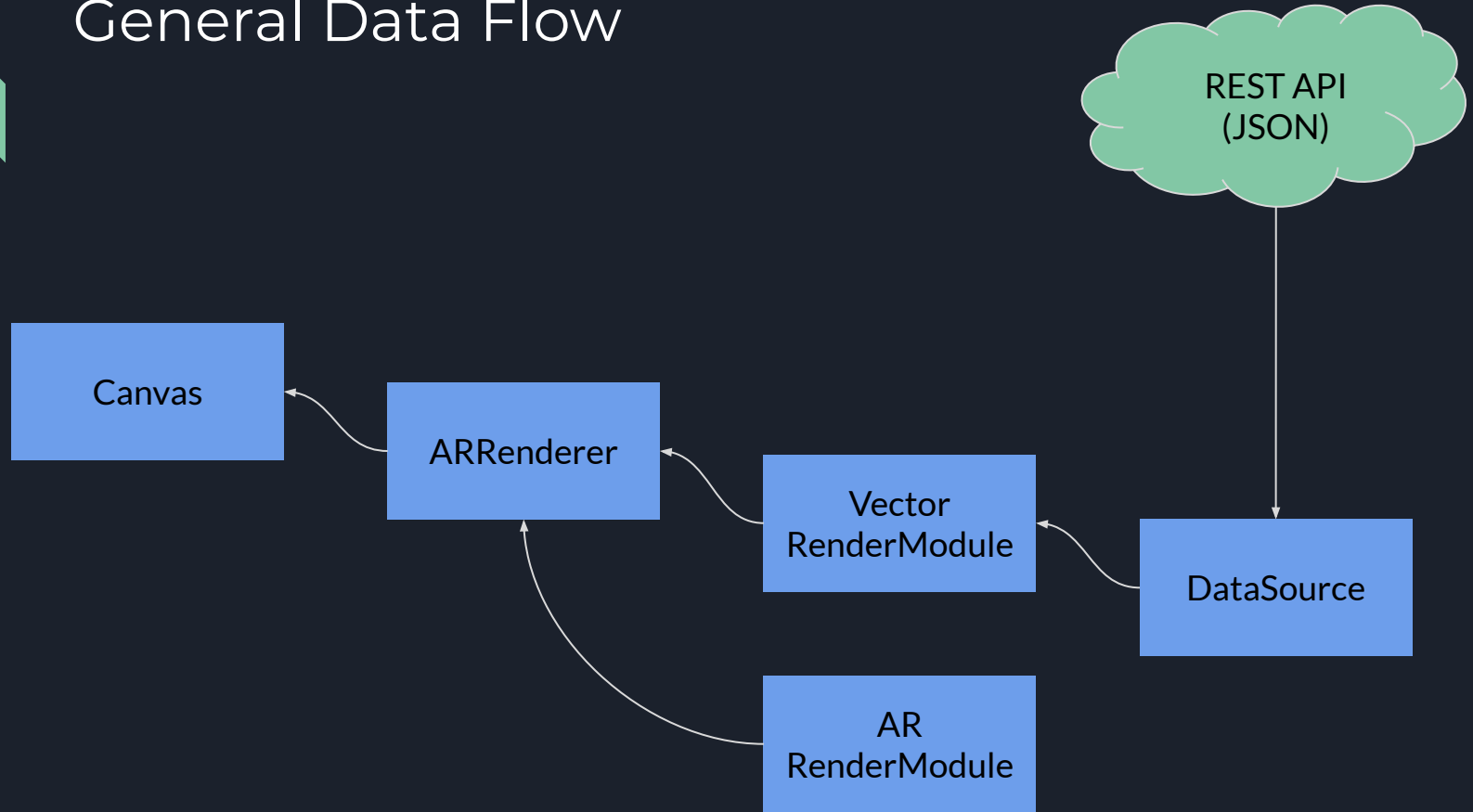




Web AR for CIFT

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General Data Flow





ARRenderer

- Supervises individual `RenderModules`
- Sets up a `Camera` and `Scene`
- Catches changes to the viewport size
- Handles `requestAnimationFrame()`



RenderModule

- `onInit()`: Called once on initialization
- `onRender()`: Called once for every frame
- `onResize()`: Called when viewport changes
- `buildObjects()`: Returns all 3D objects to be collected by `ARRenderer`

`ARRenderModule`: Initialization and housekeeping of AR.js

`VectorRenderModule`: Parse and render vectors in (near) real time



DataSource

- Provides raw vector data to `VectorRenderModule`
- Fetches new datasets in bulk
- Buffering for high smoothness (and memory usage)
 - `VectorRenderModule` can fetch data synchronously, networking is still async



Pitfalls

- AR.js does not support modules
- AR.js does therefore not support Webpack either
- AR.js does not have TypeScript type definitions
- AR.js is poorly documented
- AR.js has hard-to-read examples
- Access-Control-Allow-Origin