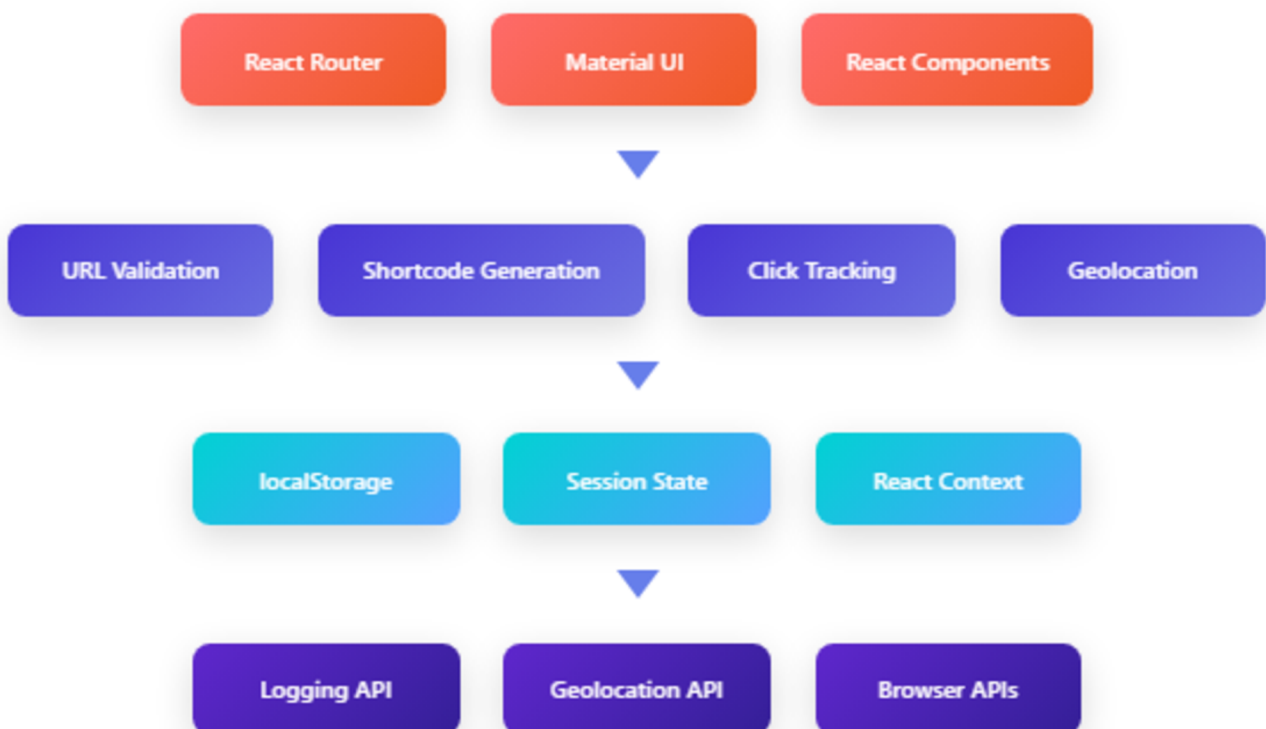This URL shortener is a fully client-side React app designed for simplicity, speed, and a smooth user experience. It uses React functional components with hooks, Material UI for clean, responsive design, and React Router for seamless navigation. All data is stored locally using localStorage, meaning no backend or server is needed. Click tracking and shortcode generation are handled entirely in the browser, with optional geolocation and logging. The codebase is modular, separating concerns between UI, logic, and storage for easier maintenance. Validation and error handling are built-in to catch issues early and inform users clearly. Security is considered with input sanitization and HTTPS, though it's limited by the client-only nature. The app is ideal for single-user, demo-scale use but built with future upgrades in mind. Long-term plans include backend support, analytics dashboards, user logins, and custom domains.

System Architecture Overview

React Router	Material UI	React Components

URL Validation	Shortcode Generation	Click Tracking	Geolocation

localStorage	Session State	React Context

Logging API	Geolocation API	Browser APIs

1

AFFORDMED®
Technology, Innovation & Affordability

URL Shortener

Long URL

Validity (minutes)
30

Custom Shortcode (optional)

SHORTEN URL

VIEW ALL RESULTS

2

AFFORDMED®
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URL Shortener

Long URL
https://docs.google.com/forms/d/e/1FAIpQLSelZ7n7P44TfZqFEZSt5t3dCsOoqmCNPlZK1UG_gljUy-2vAA/viewform

Validity (minutes)
30

Custom Shortcode (optional)
form

SHORTEN URL

VIEW ALL RESULTS

3

AFFORDMED®
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URL Shortener

Long URL

Validity (minutes)
30

Custom Shortcode (optional)

SHORTEN URL

Most Recent Short URL:
http://localhost:3000/form
Expires: 7/29/2025, 2:22:30 PM

VIEW ALL RESULTS

4

All Shortened URLs

BACK TO SHORTENER

http://localhost:3000/form
Created: 7/29/2025, 1:52:30 PM
Expires: 7/29/2025, 2:22:30 PM
Total Clicks: 0

5

docs.google.com/forms/d/e/1FAIpQLSelZ7n7P44TfZqFEZSt5t3dCsOoqmCNPtZK1UG_gjJUy-2vAA/viewform

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mrkrishna225s@gmail.com Switch account

The name, email, and photo associated with your Google account will be recorded when you upload files and submit this form

* Indicates required question

Email *

☑ Record mrkrishna225s@gmail.com as the email to be included with my response

Name *

Gujjula Anjani Krishna

College Register Number/Roll Number *

22BFA37044

Mobile Number *

6303441492

Test Attempted *

Your progress has been restored