

Emergency Response & Wildfire Analysis with **CrateDB**

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Domain & Data Sources

Natural disasters

- Wildfires & Emergency response in US

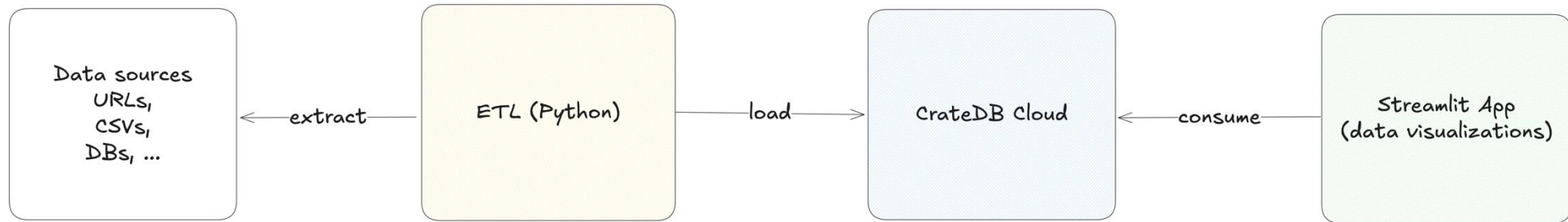
Data sources

- [National Interagency Fire Center | Current Wildland Fire Incident Locations](#)
- [The Department of Forestry and Fire Protection \(California\)](#)
- Simulated emergency calls data in Los Angeles
- Type of data: Relational / Non-relational, Textual, Geo, Time series



Architecture / Tech Stack

Python 3.10+ (Poetry, Crate driver, Pandas, ...), CrateDB, Streamlit



Analytics

- Emergency calls near fire locations
 - Utilized the **distance** function
- Wildfire locations that fall into a specific area
 - Utilized **Polygon** shapes and **within** clause.
- Emergency calls related to wildfires
 - Utilized text searching with **match** clause
- Most common emergency call topics
- The average response times between call receipt and incident discovery
- The distribution of fires across different states/cities

