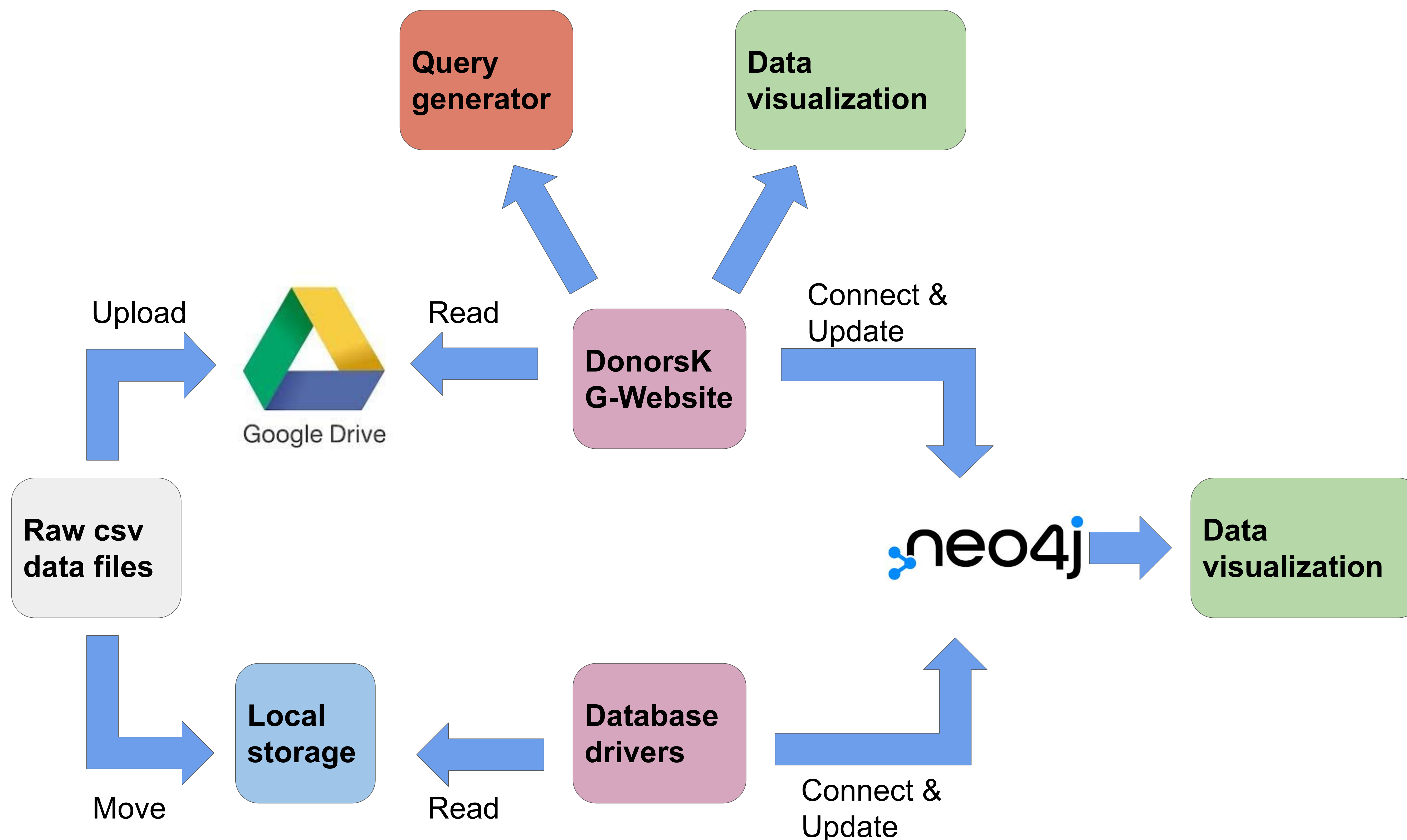


Knowledge-Graph-Database

We created a graph database that would encompass all donors to the University of Michigan and their interests and take a more expansive view of understanding how donors relate to the university. We also developed a user interface for our sponsors to interact with the database more easily.



Problem

- Leaders & Best eNewsletter open and click rates data have begun to stagnate, and they want to better understand their audiences, such as what they're most interested in and the depth of that interest.
- The Leaders & Best Newsletter is sent to approximately 150,000 recipients every two months. Each publication contains several articles that cover different aspects of philanthropy at the University of Michigan. They tag each article with the relevant metadata for content category, interest area, and school/college/unit. Each time they send the Newsletter, the click data will be matched to the subscriber as well as these metadata categories.

Methods

- Neo4j is a graph database development tool
- Neo4j has built-in packages for many languages, including Python, Java, JavaScript, Go
- Neo4j has its own quick and clean query language: Cypher, much more brief than SQL; and corresponding visualization modules with Cypher
- Neo4j has a nice cloud service called Aura which allows us to interact with the database on a web application
- Professional Version has monthly cost of \$65, but allows for more data to be stored in database. We may end up needing to purchase.



Results

