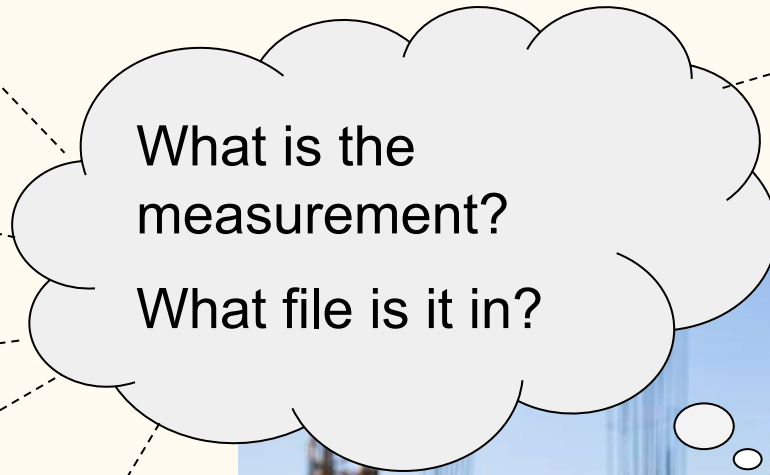


Text extractions from documents into Elasticsearch

Project Design Presentation

Team Members: Bruce Bitwayiki, Jared Hayashi,
Rushal Sohal, Tiffany Mayberry

(TEAM 19)



Design Context

- Buildertrend provides construction project management software and solutions for construction companies, homeowners, and builders.
- This search feature will save time and increase productivity by reducing the time spend searching through various documents.
- Relevant Areas of Impact:
 - Public
 - Environment
 - Economic



Design Context (cont.)

Users and Needs

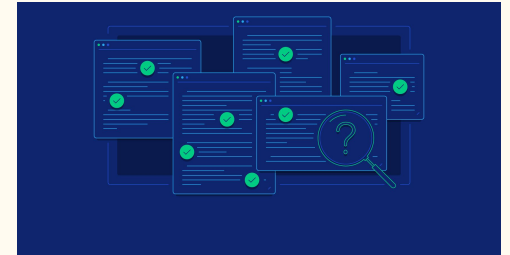
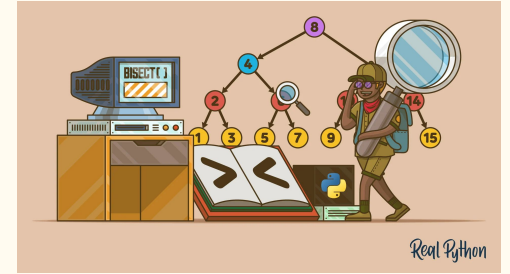
- Builders/Contractors: Access to measurements, designs, orders
- Homeowners: contracts, estimates/quotes, specification/requirements, notes
- Buildertrend Staff: support



Design Context (cont.)

Technical complexity:

- Search Algorithm
- Frontend UI/UX
- Backend Architecture
- Testing
- Project Integration



Design Exploration

Design Decisions:

- Frontend Framework: ReactJS
- Backend APIs:
 - Apache Tika
 - Elasticsearch
- Backend Communication: REST API

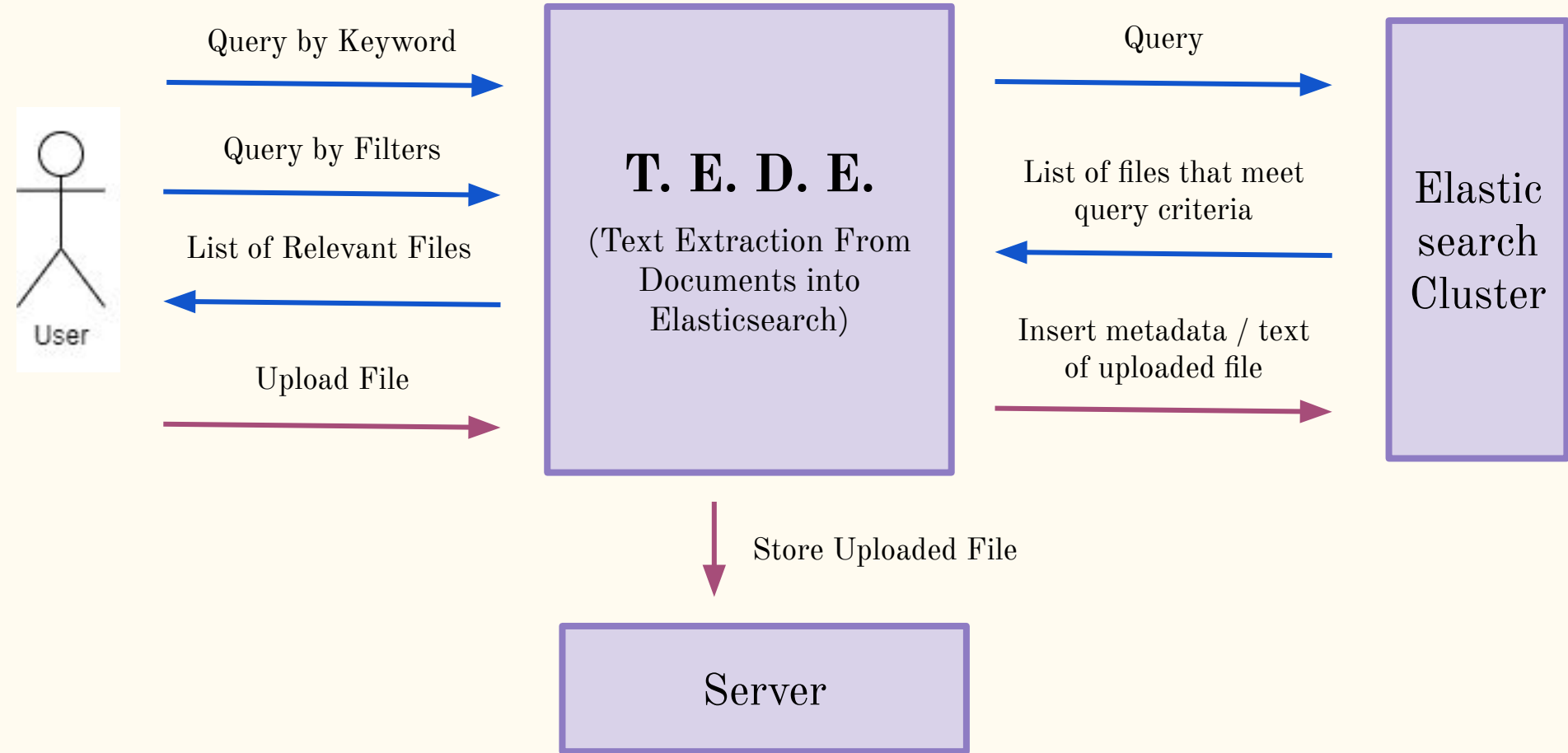
Considered Alternatives:

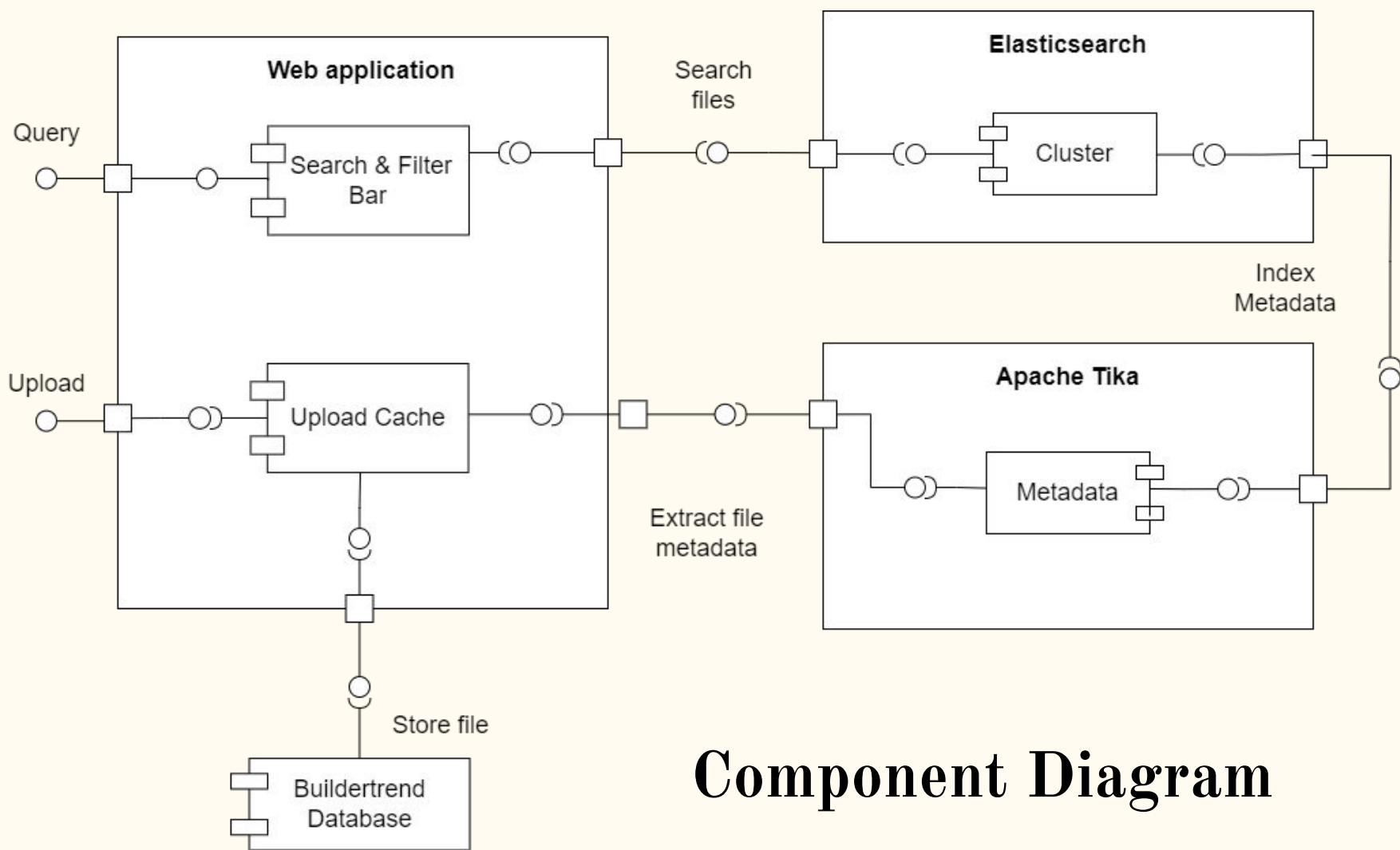
- Apache Lucene
- Apache Solr
- ElectronJS



Proposed Design

Context Diagram

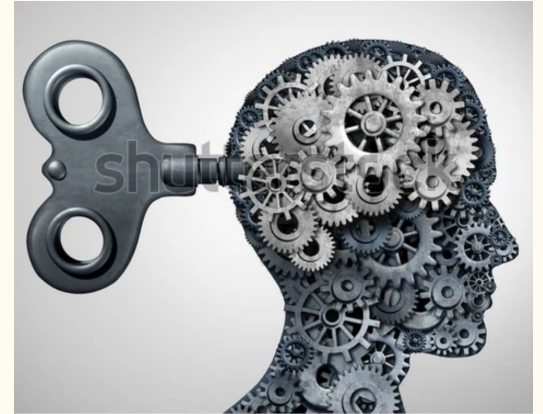




Component Diagram

Functionality

- Users will be able to:
 - **Search** using **keywords** and **filters** via a simple interface
 - **Upload** supported documents
- Application will **extract and index metadata** of uploaded documents
- Support various files types
 - Ex: txt, docx, pdf, pptx, etc.



Areas of Concern and Development:

- Uploading docs
- UI/UX
- Accuracy of results
- Query Speed
- Scalability of doc types (less concern/ more development)



The background is a dynamic and colorful composition of paint splatters. The colors transition from purple and blue on the left, through green and yellow in the center, to red and orange on the right. The splatters vary in size and intensity, creating a sense of movement and energy. The text 'Thank You!' is centered horizontally and rendered in a clean, white, sans-serif font with a slight 3D effect, making it stand out prominently against the busy, colorful background.

Thank You!