Entirely local, no cloud

raspberry pi (x2) – for crawlers (~$40) (<https://www.amazon.com/ELEMENT-Element14-Raspberry-Pi-Motherboard/dp/B07P4LSDYV/ref=sr_1_5?dchild=1&keywords=raspberry+pi+3&qid=1600952240&sr=8-5>)

server (CPU, ram, storage, network)(~$500)

Domain (~$12)

Network Cables (~$30)

Server, Crawlers, Website front-end, ranking, database

Server

* Configure network with static IP to provide website accessibility (must speak with trine staff)
* set up CI-CD

Crawlers – provide data for database(search query against this)

* Program when run will repeatedly visits websites and scans them for content.

Website – Request query and displays results that correspond after search

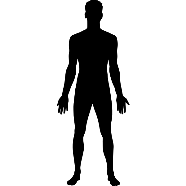
* Visual design layout mock-up
* Create link (API) to server to provide input and output (JavaScript)
  + At least provide title and URL (maybe some text)

Database – stored on server and connected with crawlers and the website (provides a structure to be queried against to provide relevant results)

* Set up database
* defining the database structure

Ranking – determines the relevancy

* write function that is called by the crawlers that reviews the website’s content and “files” the data



User

Pi

Host

Database

Ranking Algorithm

Website

Crawler(s) on Pi

Server