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# ABHISHEK KHOWALA

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## Required Skills:

(List skills needed) – To Be Discussed

## Preferred Team Communications:

Conference Call, to be discussed

## Data Sources:

FHIR Database

## Other Items:

Project has time zone flexibility. Mentors and students will determine a good time for virtual meeting

## Team Info:

Needs a Developer, QA, Project Manager. Allows one team of 4-6 members.

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## PATIENTS LIKE ME

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Given a patient, that may be randomly selected by a provider from patients in the FHIR database, find other patients that best match the given patient.

An algorithm like 'Jaccard Similarity' (<https://neo4j.com/docs/graph-algorithms/current/algorithms/similarity-jaccard/>) may be used to find other patients. The focus could be on using as many parameters as possible (that forms the sets for union and intersection for Jaccard Similarity algorithm) to find the best match and then provide a UI that shows both patient sides by side so that a viewer can visualize the similarity and the differences could also be highlighted..

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## PROJECT OBJECTIVES

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- a. Proper implementation of the Jaccard Similarity algorithm
  - b. Performance – since this will be a real time activity by provider, the results should show up for him asap and this requires lots of computation has to be done as the patient in context would be compared with all the patients in the system.
  - c. UI: For provider to trigger the comparison, and then to compare the patient and the best match. Once the best matches are found, the difference between the records can give insight into missing data or health trajectory for the patient
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## SUCCESSFUL PROJECT

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That meet project objectives.

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**Intellectual Property:** None