



Problem:

Unavailability of qualified and experienced healthcare providers is a big concern in rural areas and in government institutions like PHC, CHC, etc. across the country. Most of these posts are filled by fresh graduates out of medical academic institutions (doctors or nurses). Lack of experience and knowledge of providers at this level hinders the quality and speed of care delivery (triaging, diagnosis and treatment). While there is interest among these fresh graduates to learn, they don't have access to proper resources for meaningful training while on the job. This project aims to provide a contextual learning platform so that the care provider can learn from the cases they are handling.

Example usage:

The care provider works through his/her patient cohort as part of his/her daily duties. Based upon historical patient cohorts, disease conditions, treatment ordered and/or referrals issued the contextual training platform learns to identify critical to quality search vectors to index and retrieve (re)training material (newsletters, protocols, videos, case studies etc.) from a medical knowledge platform (e.g. webmd.com) and present a curated set of training materials for the care provider for self-training. The contextual training platform could also provide contextual expert advice in-person or through correspondence for high risk cases.

The learning inputs can come from standard knowledge source(s) or even from successful care pathways mined from active information systems.

Key features/ functionalities

- The contextual learning module can be launched (through any standard forms of API) from any healthcare application, with a context (patient cohort profile, disease profile, etc.). The learning module shall contain information of possible causes, symptoms, diagnosis and treatment options for the potential disease, population / regional statistics for the context, etc.
- User shall be able to rate the content for usefulness for the modules covered. This information will be used to improve the content filtering algorithm. User also shall be able to get real cases matching the context from the information systems for reference checks.
- The system should build the knowledge capsule dynamically from external known sources like Webmd, NHS, NIH, etc. for any given context
- The platform also shall allow caching (and hashtags) of knowledge capsules in the local store to facilitate faster access in future.

What will be provided for the project

- Reference sources in the public domain that can be used to build knowledge capsules
- UX design to show the context sensitive capsules for end user
- Test code to drive the API from contextual learning platform

Reference sources in public domain that can be used for build knowledge capsules:

- www.webmd.com
- www.cdc.gov
- www.nhs.uk
- <https://medlineplus.gov>
- <https://www.nih.gov/>
- <https://www.niaid.nih.gov/>
- <http://www.healthline.com/>
- <http://www.mayoclinic.org/>