

JKUAT/PALADIUM 2024 COP COLLEGE HALL

PROBLEM USECASES

S.No.	Challenge	Context	Theme(s)
Analytics			
1	Optimization of SMS reminder system: Students can work on optimizing the timing and content of SMS reminders sent to patients to improve appointment keeping. This could involve analyzing the effectiveness of different message formats and delivery schedules in motivating patients to take their medication regularly.	Continuity of treatment	Analytics
2	Patient risk stratification for targeted interventions: Students can develop a risk stratification model to categorize patients into high, medium, and low-risk groups based on their likelihood of discontinuing ART. This can help healthcare providers prioritize interventions and resources for patients who are most at risk.	Continuity of treatment	Predictive Analytics (ML)
3	The country is unable to effectively track the number and characteristics of active HIV clients in paper sites due to lack of EMR solutions at these sites.	Precise determination of clients in care	Analytics
4	Use Retrieval Augmented Generation (RAG) applications to develop a Chatbot for <i>Nishauri</i> Application	Promoting self-management	Generative AI/Digital Health
Digital Health Application			
5	Design and develop a public app for use at pharmacies to link clients to nearest health facility based on the test results and/or prevention services provided.	Promotion of HIV Testing and prevention services	Digital health application

6	<p>There is need to integrate AI to reduce hard coding of computations and scenario-based analytics performed on forms during data updates by providers in EMR/HIS.</p> <p>Develop</p> <p>A.) AI solution that improves Data Quality within a form/tool in a system. The AI algorithms can evaluate completeness, consistency and accuracy of data entered on forms. For example, stop responses not having numeric data, past dates or future dates, etc.</p> <p>B.) Develop intelligent suggestions at data entry to improve data quality such as filling in missing information.</p>	AI-assisted POC service	Digital health application
7	<p>When a client presents for a clinical appointment, one provider may want to highlight an issue for another service provider. Explore a way for provider to message or communicate in realtime while conducting PoC management of clients. E.g. have the clinician draw attention of pharmacist on an issue concerning the client they have just seen.</p>	OpenMRS 3.X platform	Digital health application
8	<p>Set up an automatic chat bot (either on Wiki or Slack) that uses the OpenMRS Wiki to direct folks with help requests to relevant information/pages.</p> <p>Identify how the OpenMRS RefApp could have a “Feedback” button that sends feedback into a community Slack channel (but ideally checks that sensitive patient information is not accidentally included)</p> <p>How to automatically maintain the OpenMRS Evidence Hub (om.rs/evidence) without requiring manual retrieval of hundreds+ articles from the last 20 years</p>	OpenMRS	OpenSource Community Collaboration

9	<p>The NDW self-service portal has enabled stakeholders to access and utilize data from DWH to develop custom dashboards and charts.</p> <p>This has led to great innovations in shared insights and perspectives that are not possible through traditional gatekeeping and improved on data transparency.</p> <p>There is now a need to develop a web portal available to the NDW community of users that will allow them to showcase these innovations and provide platform to discover and utilize what other members have developed.</p> <p>The platform should provide ability to share dashboards definition, metadata and sample dataset that can be reused in the BI platforms.</p>	National Data Warehouse (NDW)	Digital health application
Independent Student Innovations			
10	The hackathon seeks to gather ideas, proposals and existing innovations from university students that seek to find digital solutions for in public health	eHealth and mHealth innovations and applications in any health sphere	<ul style="list-style-type: none"> ▪ Any application or solution that focuses on digital health to provide; ▪ Efficiency: avoid unnecessary duplication and streamline the health care service between patient and provider ▪ Enhancing quality: providers have access to each other's notes ▪ Evidence based: there should still be scientific evidence on the basis of all information provided in eHealth ▪ Empowerment: empower patients to be a part of the medical process. ▪ Education: healthcare providers and patients have increased educational resources to learn and implement. ▪ Enabling: allowing easy communication between healthcare providers

			<p>and patients across the board.</p> <ul style="list-style-type: none"> ▪ Equity: make healthcare more equitable for users. ▪ Extending: allowing healthcare services and assistance across the globe instead of relying on your set geographical location ▪ Ethics: maintain the same values of professional practice, informed consent, privacy and equity.
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