MediSwift

GPT enhanced Medical Notes

Searching medical records takes too much time

Information overload in EHRs may result in **higher error rates and negatively impact patient safety**. [...] Changes focused on the usability of EHR should be considered with the end user (physician) in mind. Federal agencies have a role to play in encouraging faster adoption of improved EHR interfaces.

Nijor S, Rallis G, Lad N, Gokcen E. Patient Safety Issues From Information Overload in Electronic Medical Records. J Patient Saf. 2022;18(6):e999-e1003. doi:10.1097/PTS.0000000000001002

EHR use continues to account for a large proportion of physician time. Further attempts should be made to **redesign both EHRs and physician work processes**.

Toscano F, O'Donnell E, Broderick JE, et al. How Physicians Spend Their Work Time: an Ecological Momentary Assessment. J Gen Intern Med. 2020;35(11):3166-3172. doi:10.1007/s11606-020-06087-4

Primary care physicians spend more than **one-half of their workday, nearly 6 hours, interacting with the EHR** during and after clinic hours.

Arndt BG, Beasley JW, Watkinson MD, et al. Tethered to the EHR: Primary Care Physician Workload Assessment Using EHR Event Log Data and Time-Motion Observations. Ann Fam Med. 2017;15(5):419-426. doi:10.1370/afm.2121

Find what you are looking for

Fast and reliable in huge amounts of clinical information

Solution

Large language models can help to **improve information retrieval on unstructured data** and thus increased efficiency working on electronic health records.

Zhu, Yutao, et al. "Large Language Models for Information Retrieval: A Survey." arXiv preprint arXiv:2308.07107 (2023).

Jiang K, Mujtaba MM, Bernard GR. Large Language Model as Unsupervised Health Information Retriever. Stud Health Technol Inform. 2023;302:833-834. doi:10.3233/SHTI230282

Yang X, Chen A, PourNejatian N, et al. A large language model for electronic health records. NPJ Digit Med. 2022;5(1):194. Published 2022 Dec 26. doi:10.1038/s41746-022-00742-2

Nashwan AJ, AbuJaber AA. Harnessing the Power of Large Language Models (LLMs) for Electronic Health Records (EHRs) Optimization. Cureus. 2023;15(7):e42634. Published 2023 Jul 29. doi:10.7759/cureus.42634

Unique Value Proposition

- **Efficient Medical Notes Analysis**: Provide healthcare professionals with a powerful tool that rapidly processes and comprehends vast amounts of medical notes, extracting pertinent information.
- **Time-Saving Solution**: Streamline information retrieval, allowing healthcare professionals to allocate more time to direct patient interactions and clinical decision-making.

Business Model

- **Basic Tier**: Offers essential features for individual practitioners.
- **Pro Tier**: Includes advanced functionalities and support for larger healthcare institutions.
- **Enterprise Tier**: Customized solutions for large-scale healthcare systems with additional features, support, and integration options.

Charge fees for integrating the software with existing Electronic Health Record (EHR) systems or other healthcare platforms.

Go-to-Market Strategy

- **Healthcare Systems and Providers**: Collaborate with hospitals, clinics, and medical practices for seamless integration and adoption.
- **EHR Providers**: Partner with existing Electronic Health Record system providers for interoperability and compatibility.

Milestones and Roadmap

- **Product Development**: Continuous improvement and updates to enhance functionality and usability.
- **Customer Acquisition and Retention**: Marketing, sales, and customer support efforts.
- **Compliance and Security**: Ensuring the application meets all relevant healthcare data privacy and security standards.

Financial Projections

- **Development Costs**: Expenses related to software development, including salaries, technology infrastructure, and software licenses.
- **Marketing and Sales Costs**: Advertising, promotional activities, and sales team salaries.
- **Customer Support and Training Costs**: Personnel and resources dedicated to customer onboarding, training, and ongoing support.
- **Compliance and Security Costs**: Investments in data security measures and compliance with healthcare regulations.

Team

Tayyab Zain
Python Developer

Benjamin Senst
Medical Expertise & Data Science

Ask

Team Page

ai-challenge-with-gpt-3-5-codex-dall-e-and-whisper-api/fritzlabs

Code Repository

github.com/bsenst/llm-enhanced-ehr

App Demonstration

https://youtu.be/_y25mRdcpEM