



Connecting care: Enhancing clinical consultations for better patient outcomes



CitiusTech partnered with one of the largest integrated, not-for-profit provider group to leverage AI to find medical experts to be part of multi-disciplinary team that can provide specialized care to complex medical cases.

90+

Healthcare disciplines covered

4800+

Physicians search capability, covering past case histories, research publications, and academic pursuits

- Natural language-based interactive search with medical ontologies translation
- Continuous learning AI and ML backbone

The background

The client is the world's largest integrated, not-for-profit medical group practice. Over a million patients with complex medical conditions visit their campuses annually. Ensuring the best care necessitates collaboration across multi-disciplinary teams for precise diagnosis and personalized care plans.

The right expertise requires referring to multiple data points that include past cases handled, research work, and academic pursuits. In the absence of a formal system to identify the right expertise, clinicians depend on human networks to locate the appropriate experts. This reliance can result in care delays and an inability to leverage available expertise that may be obscure.

With a natural language-based, straightforward interactive search, physicians can sift through the enterprise case histories and knowledge bases, pointing them to the right experts and connecting with them interactively. The solution has improved multi-disciplinary collaboration, leading to timely and accurate diagnosis and care plans.

When the client resolved to simplify collaboration for their care teams, they engaged Citius Healthcare Consulting to craft and implement the appropriate framework.





“The digital transformation efforts in healthcare are creating opportunities for innovative solutions to improve care outcomes. This engagement leveraged best-in-class AI and machine learning models to improve collaboration and knowledge exchange.”

Ravinder Singh, SVP,
Citius Healthcare
Consulting



Leveraging AI and machine learning to tap into expertise

Given the client's requirement, Citius Healthcare Consulting developed a data-driven framework designed to accurately determine expertise for specific clinical conditions and procedures. This solution features an intuitive interface, allowing clinicians to easily find an expert using natural language queries.

Citius Healthcare Consulting designed an 'Expertise Framework' in collaboration with the client's Care Guidance team. This framework leverages advanced analytics, including Natural Language Processing (NLP) and machine learning, to analyze a combination of data sources—such as billing records, research publications, and physicians' profiles. This approach ensures that the most relevant expert recommendations are provided for each query.

Built on the client's cloud infrastructure, the solution understands natural language queries, extracts medical entities, and converts them into standardized medical codes (ICD-10 and CPT). It operates in an agile, rapid prototyping environment, combining off-the-shelf technologies with custom model development to deliver quick wins.

To ensure quick query resolution, the solution has built-in modularity, with each sub-component functioning as a micro-service.



Natural language
understanding



Microservices-based



Machine learning

Improving reach and accuracy for clinical guidance

Clinicians can now find experts beyond their immediate contacts in up to 90+ specialties. The data-led search removes subjectivity and helps find the best-suited expert for the query at hand. This capability is now also integrated with the client's existing "Ask The Expert" portal and has been giving superior results.

To experience these gains for your business, get in touch at consulting@citius.tech.



Shaping Healthcare Possibilities

Thank you

www.citiustech.com

This document is confidential and contains proprietary information, including trade secrets of CitiusTech. Neither the document nor any of the information contained in it may be reproduced or disclosed to any unauthorized person under any circumstances without the express written permission of CitiusTech.