Federated AI Platform (FAIP) for Safe and Interpretable Clinical Decision Making

Problem being solved:
Currently, the global surge in usage of electronic health records (EHRs) presents an opportunity to leverage their increasing volume and diversity of data in creating innovative tools for research and patient care.

- converting this data into actionable insights, particularly on a large scale across multiple sites and systems, presents significant challenges
- challenges include ensuring AI model transparency, safety, and data privacy

Solutions:
To address these obstacles, team has developed several pioneering tools such as FedScore, a groundbreaking framework that constructs scoring systems through federated learning algorithms, and operates without necessitating data sharing, thereby enabling international and multi-site collaboration without compromising data security.

- create a universal, integrated and commercially viable **Federated AI Platform (FAIP)** based on the AutoScore and FedScore frameworks
- facilitate clinicians' exploration of AI using EHR (or any structured data) without requiring any AI or programming expertise
- enable the rapid development of clinician-led scoring systems or decision-making tools through collaborative efforts across institutions, eliminating concerns related to data privacy and siloed information

Market Size:

- The global federated learning market revenue was valued at USD 141.4 million in 2024, and is expected to reach USD 260.5 million by 2030, growing at a CAGR of 10.7% till 2030

Competition:

- Prof Liu Nan's research stands at the forefront of interpretable and reliable AI globally (Dr Liu is among World's Top 2% Scientists, ranked by Stanford University & Elsevier)
- There is currently no commercially accessible platform that offers both interpretability and robust privacy protection as compared to the platform proposed
- Other companies specializing in federated learning techniques to improve clinical research and outcomes include Owkin and Dascena

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