THE PREDICTIVE HEALTH VERTICALLY-INTEGRATED PROJECTS (VIP)

TEAM TITLE: Predictive Health

GOALS: To develop, evaluate and deploy health analytics applications that can help doctors and patients to make better and healthy decisions.

TECHNOLOGIES: Data mining, machine learning, big data infrastructure, natural language processing, text mining, biostatistics, electronic health record (EHR) system, medical ontology, health data standard, cloud computing, visualization, user interface design, web applications, mobile computing.

RESEARCH ISSUES: Big data analytic platform for health, phenotyping from patient data, disease surveillance, predictive modeling, privacy preserving data mining, smart health monitoring, health data visualization, health data generation, patient engagement models through analytics, health analytic apps, health information extraction, temporal data analytics from EHR data.

TEAM ADVISORS: Jimeng Sun (CSE), Mark Braunstein (IC)

PROJECT PARTNERS & SPONSORS: Children Health of Atlanta; Center for Disease Control; Greenway Medical; Microsoft HealthVault; Amazon Web Service.

DESIRED DISCIPLINES & PREPARATION:
CS – Background in machine learning, systems, databases, algorithms, web applications. Visualization and simulation are useful but not required. Programming background in Python, Java, and JavaScript.
ISyE – Background in statistic modeling, data analysis
BME – Background in health IT systems, electronic health records.
MGMT – Background in marketing, commercialization.

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