TUTORIALS INFORMATION

Data-Driven Healthcare

Time Slot: 1330 - 1500

Speaker: David Bell, Lecturer in the Department of Computer Science at Brunel University

Abstract

Healthcare systems are a heterogeneous network of services continually reacting to demographic, economic, and technological change. Modeling this change is difficult and often hampered by limited knowledge about the healthcare system as a whole. The rapid growth in available data from internal, published and open data sources provides a number of opportunities for gaining wider system knowledge. Early health economic estimates of new medical technologies become more viable as data becomes available. In particular, new techniques can assist designers and developers of health technology in making appropriate product investment decisions. Consequently, this then allows companies to understand their likely market and possible reimbursement more thoroughly. Despite the many advantages of new medical technologies, a key problem facing decision makers is the poor understanding of the potential value gained from new or alternative product or service offerings. Tools for Evaluation Around Point-of-Care Testing (Tea-PoCT) is an Innovate UK funded project, and Web platform, where pathway data is gathered through both traditional seeking and data mining techniques using R. Visual and semantic tagging is then applied to provide provenance and reusability to collected data, supporting embedded economic models and scenario analysis. Importantly, these same tags are then utilized as a means to design, develop and deploy simulation models using traditional relational concepts (demonstrated with a Tea-SIM agent based model).