EECS 598 – Computational Modeling in HCI Fall 2019

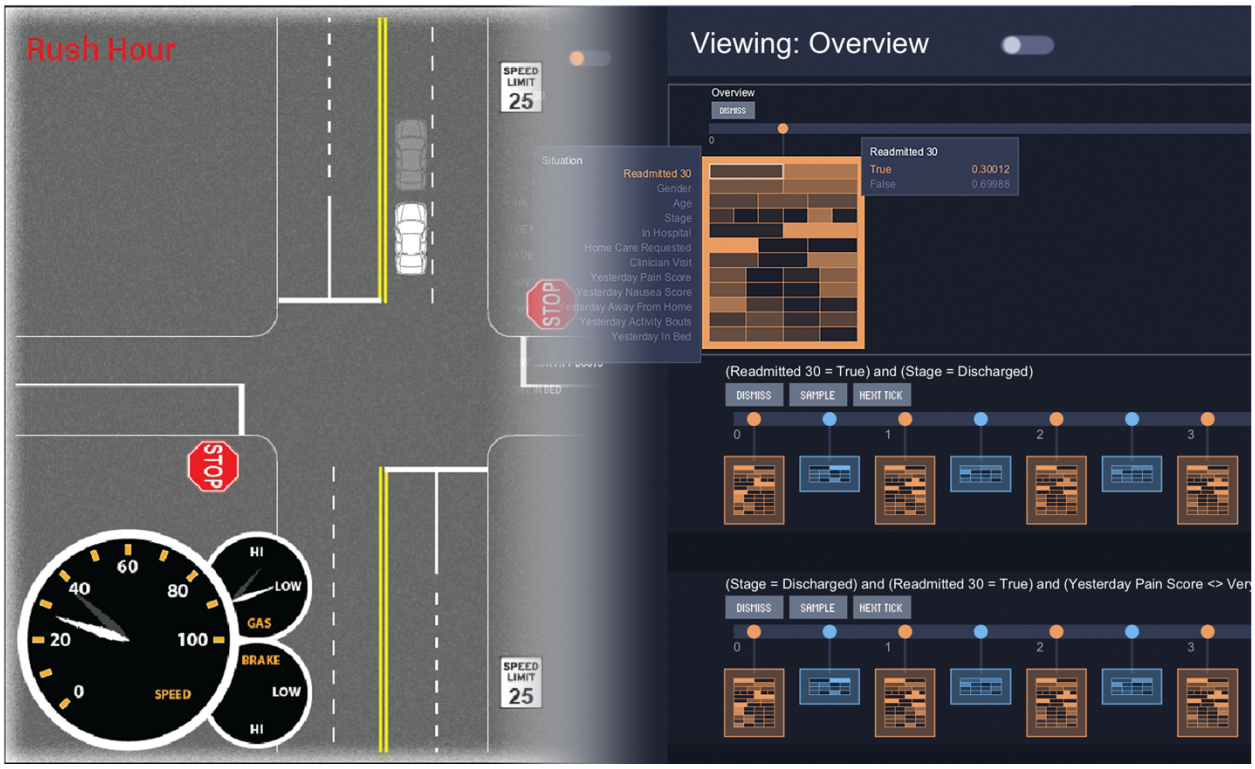
Instructor: Nikola Banovic (http://www.nikolabanovic.net)
Time and Location: Lecture TTh 3:00-4:30PM (Room TBD)
Optional Textbook: *Computational Interaction*. Oxford University Press, 2018

This seminar style course will teach students methods to track, collect, and express human behavior data as computational models of behavior. The course will have a particular focus on computational approaches to describe, simulate, and predict human behavior from empirical behavior traces data. It will contrast computational modeling with other methodologies to understand human behavior and compare computational modeling with existing behavior modeling methodologies in Human-Computer Interaction (HCI). Short individual assignments will give students exposure to existing modeling methods in HCI. Large, group-based final project will give students an opportunity to push the boundaries of computational modeling in HCI by modeling behaviors of their choice from an existing data set to design and implement a novel Computational Modeling system from scratch.

Prerequisites: Programming experience in Java, Python, Matlab, or R

Examples of previous final projects include:

- Modeling and Measuring User Trust in AI Expert Systems
- Automatically Auditing Government Benefit Eligibility Websites
- Personalizing Active Learning
- Modeling Users' Website Aesthetics Preferences



Computational Modeling in HCI enables novel systems that range from coaching aggressive drivers to be safe in traffic (left) to helping clinicians simulate and predict patients' healthcare outcomes (right).