

Leader: Dr. Mauricio Santillana

Students will have an opportunity to explore multiple data sources that may reflect (or lead to) changes of human behavior (human mobility as inferred by anonymized mobile phones, Google search activity, Twitter microblogs, Clinicians searches, Weather) potentially related to disease activity for COVID-19, Dengue Fever, Influenza, and other emerging infectious diseases. They may explore how interventions, changes in weather patterns, and other changes in human behavior, may have had an impact on the dynamics of disease transmission. They may also identify ways in which one may use historical data to anticipate the emergence of disease outbreaks or forecast the dynamic trajectory of disease transmission via predictive models that use multiple machine learning techniques that range from time-series clustering, dynamic dimensionality reduction, dynamic training of predictive models, etc.