Data Science and Analytics

The tutorial will share our experience and views on software data analytics in practice with a retrospect to our previous work as well as examples from the current work. Data science involves putting together an interdisciplinary team of experts and one of the critical success factors is that it should follow a due process in conducting analytics and using machine learning techniques. A blueprint of data science projects in practice will be discussed as the methodology used in Data Science Lab (DSL) to explain the process. Over 15 years of joint research projects with the industry, we have encountered similar data analytics patterns in diverse organizations and in different problem cases. In the tutorial, we will discuss these patterns following a `software analytics' framework: problem identification, data collection, descriptive statistics and decision making.