This dissertation presents a comprehensive study of the performance of different worker quality and data fusion models with plausible simulated user populations, as well as an evaluation of their performance on the real data obtained from a full release of the Kpark app on the UCF Orlando campus. In addition to evaluate individual trust prediction methods, an algorithm selection portfolio was introduced to take advantage of the strengths of each method and maximize the overall prediction performance.

Like many other crowdsourced applications, user incentivization is an important aspect of creating a successful crowdsourcing workflow. For this project a form of non-monetized incentivization called gamification was used in order to create competition among users with the aim of increasing the quantity and quality of data submitted to the project. This dissertation reports on the performance of Kpark at predicting parking occupancy, increasing user app usage, and predicting worker quality.

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The public is welcome to attend.