



THE UNIVERSITY OF
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Department of Statistics

MASTER'S THESIS PRESENTATION

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Prediction of Arsenic Concentration Level in Bangladesh

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ABSTRACT

We study the arsenic contamination problem in Bangladesh. Our goal is to construct a model that gives accurate predictions of arsenic concentrations of wells. We start with an overview of the spatial distribution of arsenic concentration in tube wells and visualize its relationship with other recorded covariates, such as year of construction, well type, well depth. We mainly use Gaussian process model to capture the interaction between predictors and spatial pattern of arsenic distribution. Random forest and keras are also considered in this paper. Finally, we compare the out-of-sample performance and interpretability of the three models.