

# CMTH 642 LAB 10

Preparation:

```
install.packages("class")
```

```
install.packages("gmodels")
```

```
library(class)
```

```
library(gmodels)
```

We will detect prostate cancer in this lab session. Download Prostate\_Cancer.csv from the course shell. The data set contains patients who have been diagnosed with either Malignant (M) or Benign (B) cancer.

Questions:

1. Check data characteristics. Is there missing data? Prepare the data for analysis.
2. Normalize the data set.
3. Divide the data to training and testing groups.
4. Use the KNN algorithm to predict the cancer.
5. Evaluate the model performance.