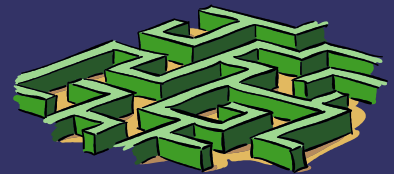


My work @ IBA

Tomáš Hudík

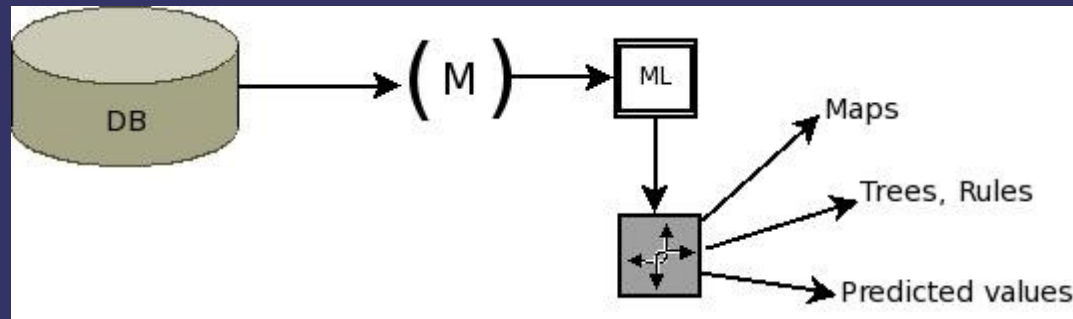


PhD student at FI MUNI

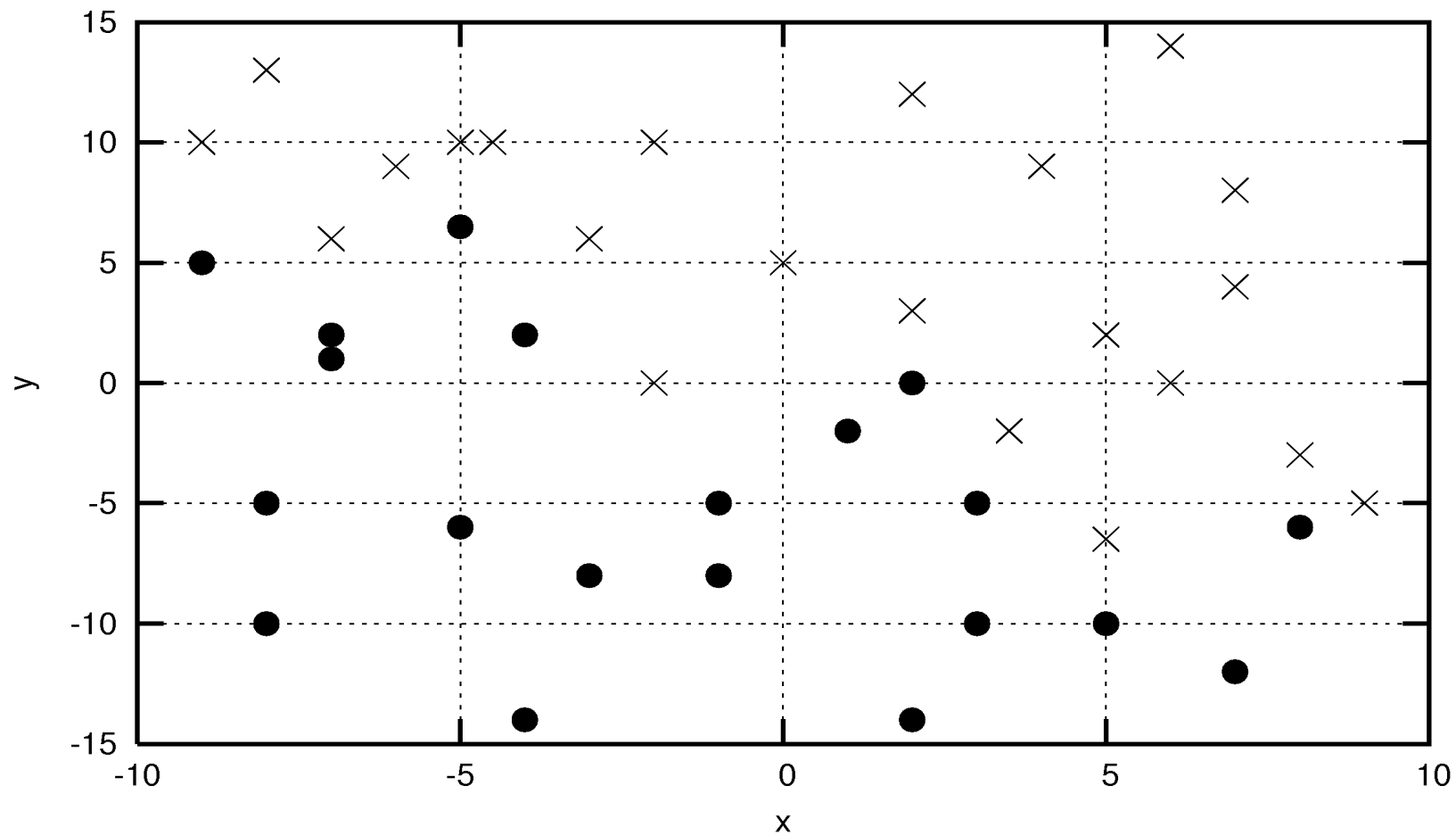
- ➔ topic: Machine Learning (ML)
- ➔ at IBA: ML and Environmental Risk Assessment
 - pollutant's transfer
 - identifying leukemic cells
 - maybe spatial modeling (GIS)

Machine learning

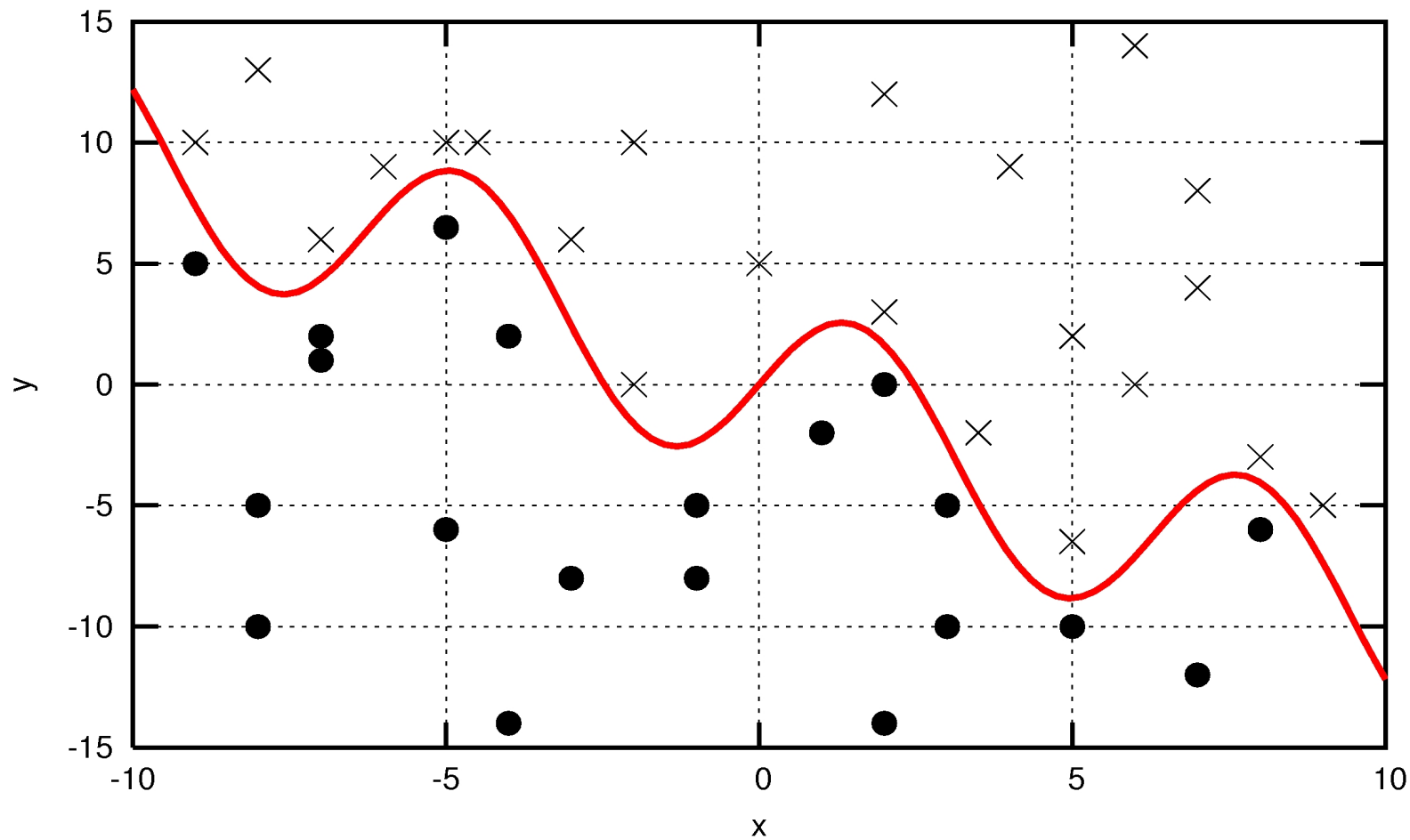
- ➔ Black box
- ➔ Supervised



Example

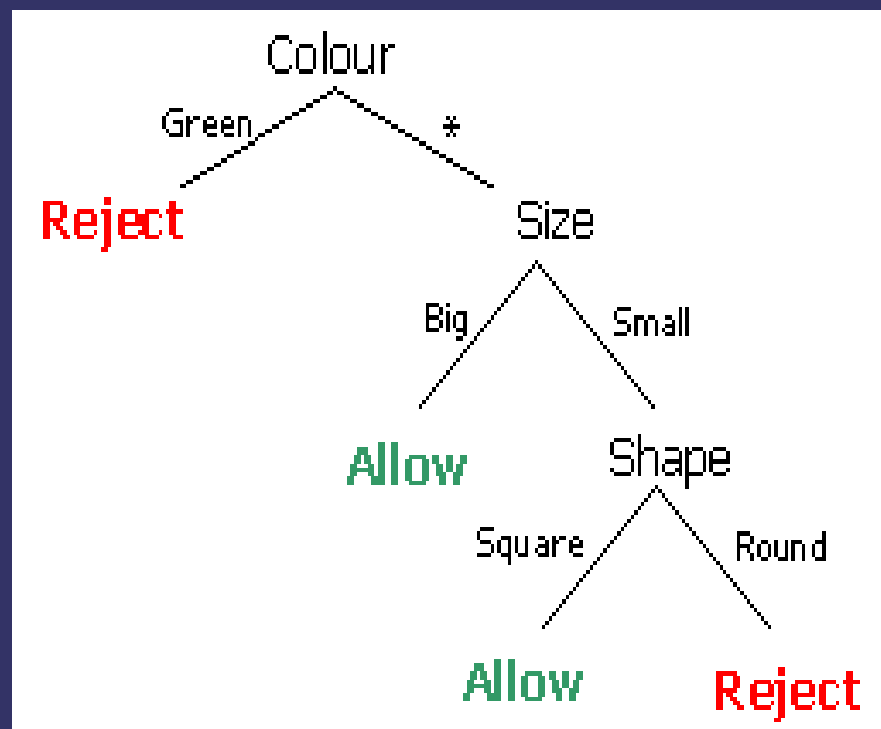


Example cont.



Example

Color	Size	Shape	Class
Red	Big	Square	Allow
Green	Small	?	Reject
Yellow	Small	Round	Reject
Red	Small	Square	Allow



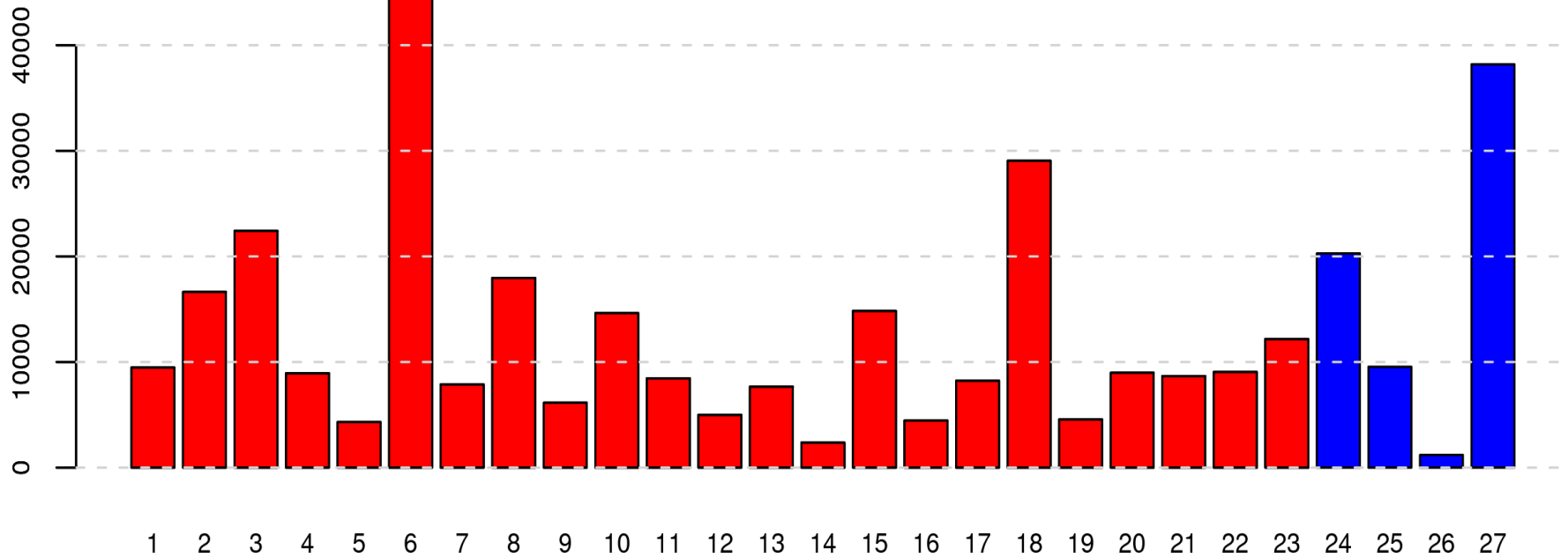
ML algorithms

- ➔ Decision trees
- ➔ Neural networks
- ➔ Support vector machines
- ➔ Bayes learning
- ➔ Classifier Committees
- ➔ Nearest neighbor

Leukemic cells

- ➔ 27 patients – 23 leukemic, 4 healthy
- ➔ Together 350000 cells
- ➔ 6 attributes: FSCH, SSCH, FL1H,FL2H,FL3H
- ➔ Baseline 80%
- ➔ Nowadays our model reach 95% accuracy

Cells per patient



Tasks usually are not easy

