Master’s Thesis in Machine Learning

About WideOrbit:

WideOrbit’s Gothenburg office is the home of WO Programmatic Digital, formerly Admeta, a developer of yield and revenue optimization technology for premium publishers and ad networks. Since 1999, WideOrbit is the world’s leading provider of advertising management technology for cable networks, local television stations and radio stations. More than 3,200 broadcasters and networks leverage WideOrbit solutions to streamline operations, maximize revenue from traditional, digital and programmatic channels, and extend their business across distribution platforms. WideOrbit is headquartered in San Francisco with offices across the United States as well as in London, Paris and Gothenburg, Sweden.

Thesis Outline:

In WideOrbit’s Programmatic TV (PTV) product, advertisers submit bids to a marketplace where they compete for television advertisement spots. Whether their bid wins or loses is only revealed when the market closes at the end of the day. However, in order to plan their budget spend, the advertisers need feedback immediately on how likely their bids are going to win. A Bid Clearance Prediction Service (BiCePS) has been developed to provide precisely this feedback using a machine learning framework based on Generalised Linear Models and Neural Networks.

The goal of this thesis is to explore different models, methodologies and optimization techniques to improve the accuracy of the predictions produced by BiCePS. The task will include:

- data analysis to understand the predictive power of available features;
- evaluation of different machine learning techniques (e.g. support vector machines, decisions trees, ensemble methods etc.);
- experimentation with and tuning of existing models (GLM & Neural networks);
- applying different optimization algorithms to fit the models (e.g. L-BFGS, stochastic gradient descent etc.).

Work will preferably be done using python and/or C#, but other tools and languages can be considered.

To Apply:

Contact David Burke: dburke@wideorbit.com