

# Machine Learning Guest Lectures

We will have two machine learning guest lectures on Friday **4 December 2020 at 10:15–12**. The tentative programme includes two 15–20 minute presentations, followed by a discussion where you can ask questions from the speakers.

The lectures will take place via the usual Zoom link at <https://helsinki.zoom.us/j/68680705433?pwd=RTVTdWFSdS96S3h0NkU5S1lFRkdZz09> (Meeting ID: 686 8070 5433, Password: 014569).

The speakers and the topics are:

**Andreas Henelius:** Data Science in Finance - Machine learning for overdue invoice prediction

*Abstract:* Invoice financing is a concept in banking enabling short-term borrowing by the bank's customers against the amounts due from the invoices held by the customer. Such borrowing can help the customer, e.g., with cash flow management. For this process to be feasible, it must be automated, and the bank needs to estimate the net present value of invoices, which depends on the expected payback time. In this presentation I talk about how to leverage machine learning to predict if invoices will be overdue.

*About the speaker:* D.Sc. (Tech.) Andreas Henelius is a data scientist at the OP Financial Group. Previously he worked at the University of Helsinki, Aalto University and the Finnish Institute of Occupational Health.

**Antti Ukkonen:** From voice to meaning: Machine learning for spoken language understanding

*Abstract:* I will discuss some of the many technical challenges we face at Speechly ([www.speechly.com](http://www.speechly.com)) when building a SaaS -solution using which developers with no prior ML or speech recognition experience can integrate voice functionality to their mobile or web applications. I will talk about deep learning, transfer learning, neural language models, perhaps a bit about reinforcement learning, and how to put these together in an autonomous cloud-based model training infrastructure.

*About the speaker:* Antti works currently as the Head of Natural Language Understanding at Speechly. In this role he is mainly in charge of developing and maintaining machine learning models that extract meaning from spoken language. Prior to joining Speechly in summer 2019, Antti spent almost 15 years in industry and academia as a data mining researcher. He has held positions at Yahoo! Research, Helsinki Institute for Information Technology HIIT, Finnish Institute for Occupational Health. Most recently, until December 2019, he was an Academy Research Fellow at University of Helsinki. Antti got his doctoral degree from Aalto University in 2008.

Welcome!

The lectures are part of the course DATA11002 Introduction to Machine Learning (access to the web site requires registration). Please see the course web site for possible updates.

Kai Puolamäki