Helsinki evaluation report   June 3th,   Lasse Koskinen

1: AI Helsinki 1

Event summary and report of partners

Title of the workshop - Fintech AI and big data

Venue: Supervisory Authority, Helsinki, Finland

Date: October 22, 2019

Hosting university: Tampere University (earlier University of Tampere), Finland

Regulator/supervisor: FIN-FSA

The speakers

1) Professor (AI) Heikki Huttunen, Tampere University, Finland

2) Professor (Insurance Science) Lasse Koskinen, Tampere University, Finland

3) Ph.D. Antti Talonen (Insurance Science), Tampere University, Finland

Number and role of participants

About 30 in room, about 20 followed slides + audio. Experts and managers of Finnish Supervisory Authority and Bank of Finland

The main topics

1) Deep Neural Networks — The Backbone of AI

2) Topics of Training (Use Cases)

3) Network Models to Improve Robot Advisory Portfolio Management (Use Case)

The main results

1) Understanding of main ideas and methods behind simple Neural Networks and Deep Neural Networks. An overview of topical applications.

2) Overview of use cases and their techniques. Main principles and techniques.

3) Concrete understanding of Robot Advisory Portfolio Management (Use Case). Strong and weak points – efficiency and understanding.

Feedback, new insights and main take aways

Artificial intelligence affects insurance and financial sector in really many ways – speed and video recognition and statistical modelling will be (or are) used.

For supervisors, ethical aspects of AI applications are important.

Valuable communication between supervisors and researchers.

Further remarks

Participants will stay involved through follow up communications by Tampere University.

2: AI Helsinki 2

Event summary and report of partners

Title of the workshop - Fintech AI and big data

Venue: Supervisory Authority, Helsinki, Finland

Date: November 12th, 2019

Hosting university: Tampere University (earlier University of Tampere), Finland

Regulator/supervisor: FIN-FSA

The speakers

1) Ph.D. student Francesco Lomio (AI), Tampere University, Finland

2) Professor (Insurance Science) Lasse Koskinen, Tampere University, Finland

3) Ph.D. Antti Talonen (Insurance Science), Tampere University, Finland

Number and role of participants

About 20 in room, about 20 followed slides + audio. Experts and managers of Finnish Supervisory Authority and Bank of Finland

The main topics

1) Ethics of AI

2) USE CASE – P2P Loan acceptance and default prediction with AI

3) USE CASE - Convergence and divergence of European bond correlations

The main results

1) Concrete understanding of P2P Loan acceptance and default prediction with AI (Use Case). Interpretation of the model/method is a major topic.

3) Concrete understanding of Convergence and divergence of European bond correlations (Use Case). Clever graphical presentations help in understanding dynamic dependences.

4) There are important insurance and finance specific ethical aspects like the ownership of the data.

Feedback, new insights and main take aways

Comparison between traditional statistical models and AI model is needed.

Ethical aspects and regulation are closely tied together.

Some experts were more interested in AI and some were more interested in graphical illustrations of dependences.

Further remarks

Participants will stay involved through follow up communications by Tampere University.

3: AI Helsinki 3

Event summary and report of partners

Title of the workshop - Fintech AI and big data

Venue: Supervisory Authority, Helsinki, Finland

Date: December 12th, 2019

Hosting university: Tampere University (earlier University of Tampere), Finland

Regulator/supervisor: FIN-FSA

The speakers

1) Professor (Insurance Science) Lasse Koskinen, Tampere University, Finland

2) Ph.D. Antti Talonen (Insurance Science), Tampere University, Finland

Number and role of participants

About 20 in room, about 20 followed slides + audio. Experts and managers of Finnish Supervisory Authority and Bank of Finland

The main topics

1) Ethics of AI and Use Cases

2) USE CASE (4-8)

The main results

1) Ethical and legal issues arise in all automatic decision systems.

2) Concrete understanding new supervisory aspects related to Use Cases 4-8.

3) AI system's model risk differs from traditional model risk.

Feedback, new insights and main take aways

Thorough understanding of modeling process is needed in managing the model risk related to nontraditional (AI or data driven) fintech models.

Ethical and legal aspects must be considered in early stage when introducing a new AI process.

Paper "Artificial Intelligence, Data, Ethics: A Holistic Approach for Risks and Regulation" by Alexis Bogroff and Dominique Guegan is useful in communication between supervisors and researches

Use Cases (4-8) provide good examples of modern technological applications.

Further remarks

Participants will stay involved through follow up communications by Tampere University

4: AI Stockholm 1

Event summary and report of partners

Title of the workshop - Fintech AI and big data

Venue: Supervisory Authority, Stockholm, Finland

Date: October 25, 2019

Hosting university: Tampere University (earlier University of Tampere), Finland

Regulator/supervisor: SWE-FSA

The speakers

1) Professor (AI) Heikki Huttunen, Tampere University, Finland

2) Professor (Insurance Science) Lasse Koskinen, Tampere University, Finland

3) Ph.D. Antti Talonen (Insurance Science), Tampere University, Finland

Number and role of participants

About 10 experts and managers of Swedish Supervisory Authority.

The main topics

1) Deep Neural Networks — The Backbone of AI

2) Topics of Training (Use Cases)

3) Network Models to Improve Robot Advisory Portfolio Management (Use Case)

The main results

1) Understanding of main ideas and methods behind simple Neural Networks and Deep Neural Networks. An overview of topical applications.

2) Overview of use cases and their techniques. Main principles and techniques.

3) Concrete understanding of Robot Advisory Portfolio Management (Use Case). Strong and weak points – efficiency and understanding.

Feedback, new insights and main take aways

Artificial intelligence affects insurance and financial sector in really many ways – speed and video recognition and statistical modelling will be (or are) used.

For supervisors, ethical and legal aspects of AI applications are important.

Valuable communication between supervisors and researchers.

Further remarks

Participants will stay involved through follow up communications by Tampere University.

5: AI Stockholm 2

Event summary and report of partners

Title of the workshop - Fintech AI and big data

Venue: Supervisory Authority, Stockholm, Sweden

Date: November 19th, 2019

Hosting university: Tampere University (earlier University of Tampere), Finland

Regulator/supervisor: SWE-FSA

The speakers

1) Professor (Insurance Science) Lasse Koskinen, Tampere University, Finland

2) Ph.D. Antti Talonen (Insurance Science), Tampere University, Finland

Number and role of participants

About 10 experts and managers of Swedish Supervisory Authority.

The main topics

1) Ethics of AI

2) USE CASE – P2P Loan acceptance and default prediction with AI

3) USE CASE - Convergence and divergence of European bond correlations

The main results

1) Concrete understanding of P2P Loan acceptance and default prediction with AI (Use Case). Interpretation of the model/method is a major topic.

3) Concrete understanding of Convergence and divergence of European bond correlations (Use Case). Clever graphical presentations help in understanding dynamic dependences.

4) There are important insurance and finance specific ethical aspects like the ownership of the data.

Feedback, new insights and main take aways

Comparison between traditional statistical models and AI model is needed.

Transparency and interpretation are key concerns with AI.

Ethical aspects and regulation are closely tied together.

Some experts were more interested in AI and some were more interested in graphical illustrations of dependences.

Further remarks

Participants will stay involved through follow up communications by Tampere University.

6: AI Stockholm 3

Event summary and report of partners

Title of the workshop - Fintech AI and big data

Venue: Supervisory Authority, Stockholm, Sweden

Date: December 10th, 2019

Hosting university: Tampere University (earlier University of Tampere), Finland

Regulator/supervisor: SWE-FSA

The speakers

1) Professor (Insurance Science) Lasse Koskinen, Tampere University, Finland

2) Ph.D. Antti Talonen (Insurance Science), Tampere University, Finland

Number and role of participants

About 10 experts and managers of Swedish Supervisory Authority.

The main topics

1) Ethics of AI and Use Cases

2) USE CASE (4-8)

The main results

1) Ethical and legal issues arise in all automatic decision systems.

2) Concrete understanding new supervisory aspects related to Use Cases 4-8.

3) AI system's model risk differs from traditional model risk.

Feedback, new insights and main take aways

Thorough understanding of modeling process is needed in managing the model risk related to nontraditional (AI or data driven) fintech models.

Ethical and legal aspects must be considered in early stage when introducing a new AI process.

Paper "Artificial Intelligence, Data, Ethics: A Holistic Approach for Risks and Regulation" by Alexis Bogroff and Dominique Guegan is useful in communication between supervisors and researches

Use Cases (4-8) provide good and concrete examples of modern technological applications.

In workshop teams consisting different supervisory experts (lawer, actuary, risk analyst etc) are good for the internal communication in supervisory authority

Further remarks

Participants will stay involved through follow up communications by Tampere University