



The EUROPEAN SUPERVISOR EDUCATION INITIATIVE
(ESE)

presents the web-based workshop on

**“MACHINE LEARNING AND ARTIFICIAL
INTELLIGENCE FOR FINANCIAL SUPERVISORS –
LEVEL I”**

via WebEx from 9 – 11 November 2022

OBJECTIVES

In supervision, the analysis of large amounts of data and the development of risk models are of crucial importance. The workshop “Machine Learning and Artificial Intelligence for Financial Supervisors” is designed to acquaint supervisors with the implications and limitations of the technology based on a hands-on learning experience. Participants experience a (virtual) multiple-day bootcamp with the aim to gain basic knowledge and transfer this in discussions relevant for financial supervision and economics. The programme includes introductory e-learnings on AI, neural networks and provides ample opportunity to interact with the trainer/s as well as participants from other European central banks and authorities.

TARGET GROUP

The course is intended for staff and competent authorities who wish to enlarge established patterns of thinking and develop new digital understanding for challenges in supervision and banking. In order to succeed in this workshop, it is recommended to have a basic knowledge of programming functions; however, coding will not be part of this training. Participants are invited to discuss the topic, possible implications and transfers in an open and differentiated way.

FORMAT

Presentations, Q&A, assignments, group work and e-learnings / educational videos (accessible prior and after the workshop).

TRAINERS

Experts from academia, financial industry and a Fintech start-up.



EUROPEAN SUPERVISOR EDUCATION INITIATIVE

ESE Web Training

“MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE FOR FINANCIAL SUPERVISORS – LEVEL I”

PROGRAMME

Wednesday, 9 November 2022

- 09.00 – 09.15 **Welcome**
*ESE representative
and
TechQuartier, Patrice Pogorelik*
- 09.15 – 11.00 **Session I: “A primer on Artificial Intelligence”**

Dr. Kevin Bauer
- 11.00 – 11.10 **Break**
- 11.10 – 11.55 **Session II: Introduction to AI, Machine Learning and Data Science**

Dr. Kevin Bauer
- 11.55 – 12.00 **Break**
- 12.00 – 13.30 **Session III: “Introduction to Artificial Neural Networks”**
 - The application of neural networks
 - Neural networks in supervision
Dr. Kevin Bauer
- 13.30 – 13.35 **Wrap-up Day 1**



Thursday, 10 November 2022

08.45 – 09.00 Arrival and time for open questions

Dr. Kevin Bauer

09.00 – 10.30 Session IV: “NLP – Natural Language Programming”

Dr. Kevin Bauer

10.30 – 10.40 Break

10.40 – 12.25 Session V: “Implementation possibilities for AI in supervision”

Dr. Kevin Bauer

12.25 – 12.30 Break

12.30 – 13.30 Session VI: Startup Insights and Q&A

- Real-Life example on the application of Artificial Intelligence

Robert Holzmann, Product Lead at hawk:ai

13.30 – 13.35 Wrap-up day 2



Friday, 11 November 2022

08.45 – 09.00 Arrival and time for open questions

Dr. Kevin Bauer

09.00 – 11.00 Session VII: “eXplainable AI”

Dr. Kevin Bauer

11.00 – 11.10 Break

11.10 – 12.00 Session VIII: Institutional Insights

- *Presentation of the project “safeFBDC”*
- *Input Session on Data-driven prevention of money laundering*

*Luisa Kruse, Innovation Manager at TechQuartier and
Project Lead of safeFBDC
& Anton Nickel, Lead Data Scientist at Deutsche Börse
Group*

12.00 – 12.05 Break

12.05 – 12.45 Session IV: Open Discussion on the Implications of
Artificial Intelligence in the context of Supervision

Dr. Kevin Bauer

12.45 – 13.00 Wrap-up, closing remarks and feedback

TechQuartier (Patrice Pogorelik)



Preparatory E-Learnings / Online Courses (2 weeks prior and 1 month after the workshop)

- Course 1 **Introduction Course – Artificial Intelligence**
- AI – A general purpose technology
 - What is AI – From the origins until today
 - AI – Problems, Biases and Implications

- Course 2 **Prediction Machines**
- Perceptron's and Neural Networks
 - Backpropagation and Overfitting
 - Convolutional Networks
 - Danger and Limits

ORGANISATIONAL INFORMATION

REGISTRATION

Participation Fee: 400 Euro – 650 Euro (depending on final group size)

Registration Deadline: 19 October 2022

Please register via the ESE website: <https://www.ese-initiative.org/ese-en/trainings/online-registration>

Confirmations and the link for participation will be sent after the registration deadline.

Free cancellation is possible until the registration deadline elapses.

Invoices will be issued by the ESE Secretariat after the training.

The web seminar will be delivered via WebEx.

WEB SEMINAR ORGANISATION

ESE Secretariat at Deutsche Bundesbank,

Email: ese-initiative@bundesbank.de

Phone: +0049-(0)69-9566-7809



EUROPEAN SUPERVISOR EDUCATION INITIATIVE

ABOUT ESE

The European Supervisor Education Initiative (ESE) is an alliance of central banks and supervisory authorities in Europe with the objective to further qualify financial supervisors in Europe. Its members are Bank of Slovenia, Banque centrale du Luxembourg, Czech National Bank, De Nederlandsche Bank, Deutsche Bundesbank, German Federal Financial Supervisory Authority and Oesterreichische Nationalbank.

ESE is committed to high level training based on uniform standards to enhance financial supervisors' knowledge and skills and to promote a common European supervisory culture and practice. The initiative offers a modular seminar programme for banking, insurance and securities and markets supervisors, financial stability analysts and economists from central banks and supervisory authorities in Europe.