SHORT
ADVANCED
PROGRAMME (SAP)

R U N
REGIONAL
UNIVERSITY
NETWORK.EU

DESIGN EXPEDITION:
EMOTIONAL INTELLIGENCE MEETS ARTIFICIAL INTELLIGENCE IN BUSINESS DESIGN

8 - 15 . FEBRUARY . 2021

+INFO: WWW.RUN-EU.EU
Organised by HAMK and IPCA

PROGRAMME DESCRIPTION/OBJECTIVE

The Design Expedition: Emotional Intelligence meets Artificial Intelligence in Business Design is a RUN-EU Short Advanced Programme (SAP), jointly coordinated by HAMK and IPCA, offering an experimental learning journey to emotions and artificial intelligence during a 1-week online workshop, from the 8th to the 15th of February, 2021. All RUN-EU students from any level of studies are invited to participate. Participants will be grouped in multidisciplinary and multicultural teams.
The Challenge is to create a solution for the interactive future customer experience of a grocery store visitor. Participants must create a solution which encompasses the possibilities connected but not limited to Computer Vision, Emotional Intelligence and Artificial Intelligence Applications.

PROPOSED LEARNING OUTCOMES

At the end of this RUN-EU SAP students will be able to:
- Apply critical thinking, creative problem-solving concepts and design thinking models and tools for solving combined business design, emotional intelligence and artificial intelligence learning challenges
- Work in multidisciplinary, multicultural and co-creation environments
- Communicate information, ideas, problems and solutions to both specialist and non-specialist audiences clearly
- Propose solutions for societal real problems and challenges that demand innovation and a varied set of skills

DATE From the **8th to the 15th of February**, 2021 (Some preparatory work from the 4th to the 7th of February will be required)

MODE OF DELIVERY Online

LANGUAGE OF INSTRUCTION English

ECTS CREDITS 2

ACADEMIC RECOGNITION
To be defined by each Home Institution.

ELIGIBLE PARTICIPANTS
RUN-EU Students from any study cycle.

HOW TO APPLY
Fill in the Application Form **here.**

DEADLINE FOR APPLICATIONS
26th of January

SELECTION CRITERIA
Order of submission (first come, first served), motivation, wide representation of subject areas/fields of study and balanced participation of RUN-EU member institutions.

CONTACT DETAILS
run-eu@ipca.pt and kati.heikkinen@hamk.fi

POLITÉCNICO DE LEIRIA · IPCA INSTITUTO POLITÉCNICO DO CÁVADO E DO AVE · AIT Connect & Discover · LIT LIMERICK INSTITUTE OF TECHNOLOGY · HAMK HÄMEEN AMMATTIKORKEAKOULU UNIVERSITY OF APPLIED SCIENCES · SZÉCHENYI EGYETEM UNIVERSITY OF GYŐR · NHL STENDEN university of applied sciences · FH Vorarlberg University of Applied Sciences

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PROGRAMME AT A GLANCE

8TH to the 15TH FEBRUARY 2021

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	GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
	GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
THURSDAY 04/02					TEAM BUILDING		PROJECT OBJECTIVE		INDIVIDUAL WORK			
FRIDAY-SUNDAY 05-07/02				PRE-RECORDED SESSIONS								
MONDAY 08/02			LIVE SESSIONS	INDIVIDUAL WORK		LIVE SESSIONS		INDIVIDUAL WORK				
TUESDAY 09/02		LIVE SESSIONS		INDIVIDUAL WORK	LIVE SESSIONS		LIVE SESSIONS	INDIVIDUAL WORK				
WEDNESDAY 10/02		LIVE SESSIONS	DESIGN EXPEDITION PROJECT			WORKSHOP		DESIGN EXPEDITION PROJECT				
THURSDAY 11/02					DESIGN EXPEDITION PROJECT/WORKSHOPS							
FRIDAY 12/02		DESIGN EXPEDITION PROJECT			FINAL PRESENTATIONS							
MONDAY 15/02			HOWULEARN				FINAL REPORT					

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FEBRUARY 4TH | THURSDAY *11:00 - 17:00 GMT*

	GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
	GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
THURSDAY 04/02					TEAM BUILDING		PROJECT OBJECTIVE		INDIVIDUAL WORK			

Team Building
- 🕐 11:00 - 13:00
- 👥 Group Work
- 👤 Vesa Tuomela (HAMK) and SAP Coordinators
- 📄 Personal Introduction and building collective rapport.

Project Objective
- 🕐 13:00 - 14:00
- 👥 Individual Work
- 👤 Vesa Tuomela (HAMK) and SAP Coordinators
- 📄 Understanding the Project Objective.

Home Work
- 🕐 15:00 - 17:00
- 👥 Group Work
- 👤
- 📄 Form the Team canvas and rules for the team

FEBRUARY 5TH - 7TH | FRIDAY TO SUNDAY

	GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00
	GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
FRIDAY-SUNDAY 05-07/02				PRE-RECORDED SESSIONS							

Design Thinking
- 🕐 At your pace
- 👥 Individual Work
- 🖥 Pre-recorded Lecture
- 👤 Satu Jumisko-Pyykkö, Vesa Tuomela and Jukka Raitanen (HAMK)

Emotions
- 🕐 At your pace
- 👥 Individual Work
- 🖥 Pre-recorded Lecture
- 👤 Satu Jumisko-Pyykkö (HAMK)

Business Design as a Development Tool
- 🕐 At your pace
- 👥 Individual Work
- 🖥 Pre-recorded Lecture
  Vesa Tuomela (HAMK)

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FEBRUARY 8TH — MONDAY 08:00 - 16:00 GMT

	GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
MONDAY 08/02	GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00

Timeline blocks: LIVE SESSIONS (09:00–10:00 GMT), INDIVIDUAL WORK (10:00–11:00 GMT), LIVE SESSIONS (13:00–14:00 GMT), INDIVIDUAL WORK (15:00–16:00 GMT)

Intelligence Beyond Logic (Freezing Week)
- 🕐 08:30 - 10:00
- Individual Work — Live Lecture
- 👤 Asta Raami

Artificial Intelligence and Machine Learning: current challenges (Freezing Week)
- 🕐 12:30 - 13:30
- Individual Work — Live Lecture
- 👤 João Vilaça (IPCA)

📄 A brief introduction to the current trends on machine learning. Taking from the traditional AI up to the actual state of Machine Learning. Why the boom? What has been achieved in the last years? What to expect in the future?

How to utilise your Emotional Intelligence skills when you need them most
- 🕐 13:30 - 14:30
- Individual Work — Live Lecture
- 👤 Helinä Mellanen (HAMK)

Essay on Lecture
- 🕐 10:00 - 12:00 At your pace
- Individual Work
- 👤 Asta Raami

Lecture Notes and Analysis
- 🕐 At your pace
- Individual Work
- 👤 João Vilaça (IPCA)

Essay on Lecture
- 🕐 At your pace
- Individual Work
- 👤 João Vilaça (IPCA)

Homework: Map of Emotional Intelligence
- 🕐 At your pace
- Individual Work — Live Lecture
- 👤 Helinä Mellanen (HAMK)

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FEBRUARY 9TH | TUESDAY *08:00 - 15:30 GMT*

GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00

TUESDAY 09/02 — LIVE SESSIONS | INDIVIDUAL WORK | LIVE SESSIONS | | LIVE SESSIONS | INDIVIDUAL WORK | | | | |

Neural Networks for Computer Vision

🕐 08:00 - 10:00
🔗 Individual Work
Live Lecture
👤 José Henrique Brito and Duarte Duque (IPCA)

📄 An overview of the Neural Networks idea and how they work, including some of the basic concepts of the process of training and using a neural network. It will follow some examples of the use of NN for Computer Vision. The session will include different examples, from face recognition, image tracking and facial emotion detection.

Lecture Notes and Analysis

🕐 10:00 - 10:45
🔗 Individual Work
👤 José Henrique Brito and Duarte Duque (IPCA)

Building Collaborative Understanding of the subject

🕐 10:45 - 11:45
🔗 Group Work
Live Facilitation
👤 José Henrique Brito and Duarte Duque (IPCA)

Image Analytics (Freezing Week)

🕐 11:45 - 12:45
Live Lecture
👤 Janne Flink (Accenture Oy)

Emotional Intelligence in Modern Business (Freezing Week)

🕐 13:30 - 14:15
🔗 Individual Work
Live Lecture
👤 Helinä Mellanen (HAMK)

Homework: Framework of Operational Possibilities

🕐 14:15 - 15:15 At your pace
🔗 Individual Work
👤 Helinä Mellanen (HAMK)

Lecture Notes and Analysis

🕐 15:15 - 16:00
🔗 Individual Work
👤 Janne Flink (Accenture Oy)

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FEBRUARY 10TH	WEDNESDAY *08:00 - 18:00 GMT*

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GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00

WEDNESDAY 10/02	LIVE SESSIONS	DESIGN EXPEDITION PROJECT	WORKSHOP	DESIGN EXPEDITION PROJECT

Affective Computing

🕐 08:00 - 09:00
⚙ Individual Work
Live Lecture
👤 Nuno Dias (IPCA)

📄 Computers are improving their ability to express and recognize affect. This might be the first step for the development of emotional computers. This keynote will provide an overview of how emotions are represented in the brain and how they can be perceived on data resulting from human behaviour and physiology. Affective Computing use cases will illustrate how emotional metrics can be extracted from natural language, human voice, facial images and biometric data.

Design Expedition Project

🕐 09:00 - 12:00
⚙ Group Work
Live Practical Work
👤 Vesa Tuomela, Jukka Raitanen (HAMK) and RUN-EU Coaches

Workshop Apps

High Level Computing

🕐 12:00 - 13:00
⚙ Individual Work
Live Lecture
👤 Lourenço Gomes and Nuno Mendes (IPCA)

📄 An overview of high level tools for mobile software development. Examples of mobile applications taking advantage of the mobile devices hardware (camera/sensors/GPS).

Workshop Apps

Building Collaborative Understanding of the subject

🕐 13:00 - 14:00
⚙ Group Work
Live Facilitation
👤 Lourenço Gomes and Nuno Mendes (IPCA)

Workshop I | **Design Expedition Project**

Discovery of the challenge!
Building understanding through data collection, analyses and immersion

🕐 13:30 - 16:00
⚙ Group Work
Live Practical Work
👤 Vesa Tuomela (HAMK) and RUN-EU Coaches

📄 AEIOU questions;
5W+H questions;
Root cause analyses;
Context mapping;
Critical items diagram;
Persona;
Empathy map.

Workshop II | **Design Expedition Project**

Define a problem worth solving!
Problem statement, Point of view

🕐 16:00 - 18:00
⚙ Group Work
Live Practical Work
👤 Vesa Tuomela (HAMK) and RUN-EU Coaches

📄 Team Website;
How might we…?;
Point of view;
Design criteria;
Define success;
Customer journey;
5 bold steps.

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FEBRUARY 11TH	THURSDAY *10:00 - 18:00 GMT*

GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
THURSDAY 11/02				DESIGN EXPEDITION PROJECT/WORKSHOPS							

Workshop III | Design Expedition Project

Develop solution!
Brainstorm, Designing, Visualising, Sketching

🕐 10:00 - 12:30
⮂ Group Work
Live Practical Work
👤 Jukka Raitanen (HAMK)
and RUN-EU Coaches

📄 Ideas by 6-3-5;
Evaluation (matrix);
Value proposition;
Business model;
Financial prototype;
Experimentation plan.

Workshop IV | Design Expedition Project

Delivering solution!
Designing and making a low fidelity prototype. Testing and experimenting the prototype. Designing minimum viable solution

🕐 13:00 - 15:00
⮂ Group Work
Live Practical Work
👤 Vesa Tuomela (HAMK)
and RUN-EU Coaches

📄 Low fidelity digital prototype;
Financial prototype;
Pitch deck;
Sales pitch (NABC);
Video.

Workshop IV *continues:* | Design Expedition Project

Finalising solution and presentation

🕐 15:00 - 18:00
⮂ Group Work
Live Practical Work
👤 Vesa Tuomela (HAMK)
and RUN-EU Coaches

📄 Designing and rehearsing sales pitch;
Making sales pitch video.

FEBRUARY 12TH — FRIDAY 08:00 - 13:00 GMT

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GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00
FRIDAY 12/02	DESIGN EXPEDITION PROJECT			FINAL PRESENTATIONS							

Design Expedition Project

- 🕐 08:00 - 11:00
- 👥 Individual Work
  Live Practical Work
- 👤 Vesa Tuomela (HAMK) and RUN-EU Coaches

Final Presentations

- 🕐 11:00 - 13:00
- 👥 Group Work
  Live Presentation
- 👤 SAP Coordinators, RUN-EU Coaches and Business Partner

FEBRUARY 15TH — MONDAY 09:00 - 12:00 GMT

GMT+2	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00
GMT	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
MONDAY 15/02			HOWULEARN					FINAL REPORT		

HowULearn, measuring Emotion

- 🕐 09:00 - 10:00
- 👥 Individual Work
  Live Lecture
- 👤 Liisa Postareff and Siru Myllykoski-Laine (HAMK)

HowULearn questionnaire

- 🕐 10:00 - 11:00
- 👥 Individual Work
  Live Interaction
- 👤 Liisa Postareff and Siru Myllykoski-Laine (HAMK)

Reflection of the week

- 🕐 11:00 - 12:00
- 👥 Individual Work
  Live Interaction
- 👤 SAP Coordinators

Final Report

- 🕐 11:00 - 12:00
- 👥 At your pace
  Individual Work

DESIGN EXPEDITION:
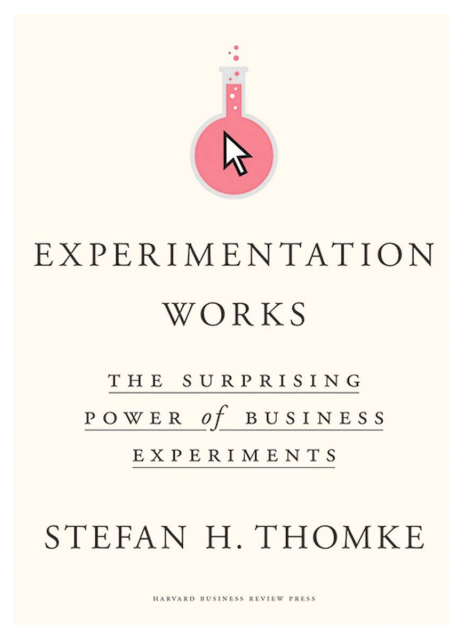## EMOTIONAL INTELLIGENCE MEETS ARTIFICIAL INTELLIGENCE IN BUSINESS DESIGN

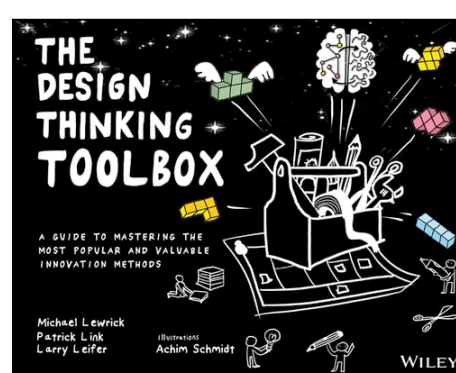# REFERENCE READING

8ᵀᴴ to the 15ᵀᴴ FEBRUARY 2021

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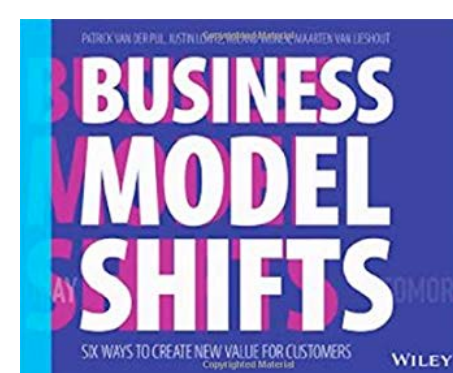Organised by HAMK and IPCA

Futurice. (2018). **Open source tools for change agents** - the what, the how and the why. Lean service creation.

Thomke, S. (2020). **Experimentation works. The surprising power of business experiments**. Harvard Business Review.

Lewrick, M., Link, P. and Leifer, L. (2020). **The design thinking toolbox**. A guide to mastering the most popular and valuable innovation methods. John Wiley & Sons.

van der Pijl, P, Lokitz, J. Wunen, R. and van Lieshout, M. (2020). **Business model shifts**. Six ways to create value for customers. John Wiley & Sons.
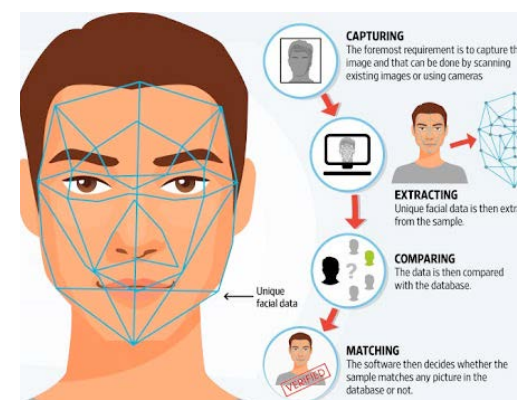

van der Pijl, P., Lokitz, J., and Solomon, L. (2016). **Design a better business**. New tools, skills and mindset for strategy and innovation. John Wiley & Sons.
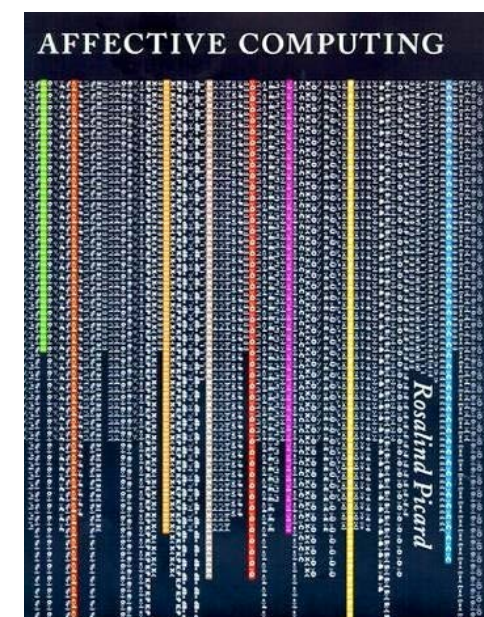

A Beginner-Friendly Explanation of How Neural Networks Work
https://towardsdatascience.com/a-beginner-friendly-explanation-of-how-neural-networks-work-55064db60df4

Computer Vision Applications in 10 Industries
https://algorithmxlab.com/blog/computer-vision/

5 Exciting Computer Vision Applications With Relevant Datasets!
https://www.analyticsvidhya.com/blog/2020/07/5-exciting-computer-vision-applications-with-relevant-datasets/

Affective Computing
https://affect.media.mit.edu/pdfs/95.picard.pdf