FuturICT 2.0 Hackathon “Educational Data Challenge”

About the project

The hackathon is organized within the framework of FuturICT 2.0[1] project (Large-scale experiments and simulations for the second generation of FuturICT). It is an international European Project, FLAG-ERA Joint Transnational Call (JTC) 2016. It started in February 2017 and will have a duration of three years.

Thematic Challenges

To be updated according to project priorities and the needs of hackathon participants:

1. Educational Data Acquisition
2. Educational Data Analytics
3. Educational Data Visualization
4. Mobile Microlearning
5. Learning Process Control Automation Technique
6. Machine Learning for Education

Expected results

At the end of the event, we expect participants to pitch a research-based **prototype** for original, innovative web-based, mobile or standalone application bringing value in educational data analysis and visualization.

Following **evaluation criteria** will be used by jury:

- Scientific value. How significant is the problem that the solution is trying to solve?
- Impact to society, usefulness;
- Business viability in context in data value chain, knowledge value chain.
- Originality & Innovation;
- Technical implementation;
- Solution development stage;
- Presentation quality;

Participation

We expect participation of master students, doctoral students and researchers from the fields of technology-enhanced learning, e-ecosystems and related research domains. We encourage cross-disciplinary teams, including, software developers, UI/UX experts, data scientists and mathematicians, data analysts, education experts

[1] About FuturICT 2.0 https://futurict2.eu/about-the-project/

and similar. We expect around 35 participants split into teams of maximum 5 people. Priority will be given to doctoral students. We expect participants to bring their computers and other relevant devices for solution development and showcasing.
Participation is free of charge, but participants must cover all travel expenses.
Prior registration is mandatory by January 7, 2019.
https://ej.uz/FuterICT20Hackathon
Participation will be confirmed until 8th of January, 2019.
Contact person: Bruno Zuga bruno.zuga@rtu.lvp

Venue
Hackathon will take place in z/s "Turbas", Tīnuži parish, Ikskile County, Latvia on 11, 12,13 January 2019.

Mentors

Name	**Field of Expertise**
Emanuele Bardone, University of Tartu (Estonia)	Educational data interpretation
Juris Binde, Latvijas Mobilais Telefons, Ltd.	5G technology in big data ecosystem
Ginta Majore, Vidzeme University of Applied Sciences	e-Ecosystems
Michal Kepka, University of West Bohemia (Czech Republic)	Analysis and applications of GIS data. Software design
Janis Stirna, Stockholm University (Sweden) and Riga Technical University	Capability driven development, enterprise modelling, systems analysis and design
Žanis Timšāns, Riga Technical University	Web development, Visualization and UX design
Ieva Vītoliņa, Riga Technical University	Data analytics, Open data
Valdis Vītoliņš, Odo, Ltd.	Business modelling, Java, GNU/Linux, Open source
Viktors Zagorskis, Riga Technical University	DevOps engineer in UNIX and Linux environments. Programming in BASH, JAVA, R, PYTHON, JS and their frameworks. Cloud technologies. Data mining and machine learning. Engineering in learning management systems: OpenEdX, SAKAI, CANVAS, and OLAT.
Ivo Čapiņš, Riga 1st Distance Education	Business Administration, Marketing

High School	Hackathon Expert, Moderator,
Dr Atis Kapenieks, FLAGERA project ERA-NET project	Expert in Knowledge Society Technologies, Technology Enhanced Learning Research.

Hackathon Schedule

January 11, 2019

09:30 Registration, coffee and snacks served along the day
10:00 Opening, goals, tasks, introducing FurturICT 2.0 project, mentors and jury
by **Dr. Atis Kapenieks**,
Moderator 1: Viktors Zagorskis, Moderator 2: Ivo Čapiņš
10:30 Workshop 1: 5G Technology in Big Data Ecosystem
by **Juris Binde**
11.30 Workshop 2: Analysis and Applications of GIS Data
by **Michal Kepka**
12.30 Workshop 3: Overview of the Hackathon Data.
by **Viktors Zagorskis**

13:00 *Lunch*

14:00 Workshop 4: Learning Data Analytics with Tableau, R, Python.
From Programming Language to Artificial Intelligence.
by **Viktors Zagorskis**
15.00 Workshop 5: Capability Driven Modelling
by **Jānis Stirna**

16:00 *Coffee break*

16:30 Workshop 6: Data Visualization and UX Design
by **Žanis Timšāns**
17:00 Workshop 7: User Behaviour Data analysis and Visualization
by **Kristaps Kapenieks**
17.30 Progress Reports on Initial Research
by **participants according to the prior list**
18:40 Presentation of Refined Hackathon Challenges
by **mentors**

19:00 *Dinner buffet*

19:45 Preparing ideas and pitching (90 sec idea on a slide)
21:00 Forming multidisciplinary teams, registering
22:30 Teamwork starts
23:00 Mentoring round No. 1
Teamwork and mentoring continues till the data interpretation sunrise comes :)

Hackathon Schedule

January 12, 2019

8.00 *Breakfast*
9.00 Checkpoint
Teamwork
9.30 Mentoring round No. 2
11.00 Workshop 8: Abductive Reasoning for Educational Data
by **Emanuele Bardone**
12.00 **Teamwork**

13.00 *Lunch & exercises*

15.00 Mentoring round No. 3
16.00 *Coffee break*
Teamwork
17.00 Pitch Drills
Teamwork
19.00 *Dinner buffet*
Teamwork and mentoring continues till the data sunrise comes :)

January 13, 2019

8.00 *Breakfast*
8.30 Checkpoint
9.00 Pitch Drills
10.30 Team pitches (5 min absolute maximum!) to the jury
11.30 *Coffee break*
12.00 Awards, Wrap up, departures