PROGRAM OF CONDUCT ML WEEK

JANUARY 26 – FEBRUARY 1, 2025

VENUE

Educational and health camp "Polytechnic-2" (Lviv region, Slavske town, I. Franka St., building 49) https://karpaty-slav.com/politeh.html

VISION

ML Week is an intensive educational and practical platform that brings together the best young talents from leading universities in Ukraine (NULP, KhPI, KPI, OP) to solve real-world problems using machine learning.

The event aims to create a community of future leaders in the field of artificial intelligence who, collaborating with each other, develop innovative solutions for business, science, and society.

MISSION

To inspire, unite, and create conditions for the development of future leaders in the field of machine learning, promoting innovation and progress in Ukraine.

GOAL

Deepening knowledge in the field of machine learning (ML):

Introducing participants to modern methods, algorithms and approaches in Computer Vision and Data Science .

Practical application of ML to solve real-world problems.

Development of practical skills:

Using current ML tools and libraries (Python, TensorFlow, OpenCV, Scikit-learn). Building a full cycle of an ML project: from data preparation to model deployment.

Formation of interuniversity teams:

creating conditions for working in mixed teams, which promotes the exchange of knowledge and experience.

Software development skills: improving teamwork, leadership, time management, and communication skills within projects.

Developing solutions for real problems:

The tasks are aimed at creating ML solutions that can be integrated into production, business, or social processes.

Familiarity and use of current trends in ML:

deep learning,

data analysis,

detection, etc.

Talent support:

identifying promising participants for further involvement in research projects or cooperation with partner companies.

recognition of achievements through awards for the best projects and teamwork.

Strengthening ties between universities:

Building partnerships between NULP, KhPI, KPI and OP.

Partnership expansion:

Communication with experts, teachers, and industry representatives who may become mentors or partners in the future.

RESULTS

- ⇒ Participants will master the theoretical and practical aspects of ML.
- ⇒ Participants acquire practical skills necessary for work in the IT industry or research centers.
- ⇒ The developed projects can be presented as examples in a CV or portfolio and can be integrated into production or research initiatives.
- ⇒ Participating universities establish contacts for future projects .

FEATURES

- 1. Participants:
 - ⇒ 80 students with
 - o National University of Lviv Polytechnic (NULP),
 - o National Technical University "Kharkiv Polytechnic Institute" (KhPI),
 - National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (KPI),
 - Odessa Polytechnic National University (OP)
 - ⇒ 20 teams
- $\hbox{\it *each team has participants from 4 universities, which promotes collaboration and knowledge exchange}.$
 - 2. Two areas of teamwork:
 - ⇒ Computer Vision
 - ⇒ Data Science
- *participants work on parallel tasks, but with the same challenges.
 - 3. Presentation of teamwork projects
 - *participants demonstrate the acquired knowledge and skills.
 - 4. Awards

*results for all days are taken into account, which motivates teams to work effectively.

ACTION PLAN

Day	Time	Activity
Race 01/26/2025	from 2:00 PM	Participants' settlement
Day 1 01/27/2025	09:00 – 10:00	Registration, welcome coffee, breakfast
	10:00 – 10:30	Opening of ML Week: opening speech, presentation of universities and partners
	10:30 – 11:30	Project presentation
	11:30 – 1 3 : 0 0	Time for communication
	1:00 – 2:00 PM	Team formation and project allocation
	14:00 – 15:00	Dinner
	15:00 – 16:30	Workshops: - Approaches to solving problems Computer Vision - Approaches to solving Data problems Science
	16:30 – 18:30	Practical work in teams (project consulting): - CV: Image Processing - D S: Dataset preparation
	17:30 – 18:30	Round table: Discussion of real-life ML cases (invited experts and university representatives)
	18:30 – 19:30	Dinner
Day 2 01/28/2025	09:00 – 10:00	Morning coffee, breakfast
	10:00 – 11:30	Workshops: Popular ML algorithms Model quality assessment and metric selection
	11:30 – 13:00	Practical work in teams (project consulting): - CV: Image Classification - DS: Data Clustering and Prediction
	13:00-14 :00	Time for communication
	14:00 – 15:00	Dinner
	15:00 – 17:00	Practical work in teams (project consulting): - CV: improved image classification - D S: search for the best learning model
	17:00-18:0 0	Q&A: answers to questions from teams
	18:30 – 19:30	Dinner

Day 3 01/29/2025	09:00 – 10:00	Morning coffee, breakfast
	10:00 – 14:00	Chairlift to Mount Zakhar Berkut Skiing/sledding
	14:00 – 15:00	Dinner
	15:00 – 16:30	Skiing/sledding
	16:30 – 18:30	Practical work in teams (project consulting): - CV: improved image classification - DS: finding the best learning model
	18:30 – 19:30	Dinner
Day 4 01/30/2025	09:00 – 10:00	Morning coffee, breakfast
	10:00 – 1:00 PM	Intensive work on projects (project consulting): - CV: Object detection tasks in images - DS: Big Data Analysis (Big Data) and creating a recommender system
	1:00 PM – 2:00 PM	Time for communication
	14:00 – 15:00	Dinner
	15:00 – 16:30	Continuing work on projects, final optimization of models, preparation of project presentations
	16:30 – 17:30	Mentoring sessions: tips from experts
	17:30 – 18: 3 0	Rehearsing presentations in teams
	18:30 – 19:30	Dinner
Day 5 01/31/2025	09:00 -10:00	Morning coffee, breakfast
	10:00 – 14:00	Presentation of projects before the jury (experts, teachers, partners)
	14:00 – 15:00	Dinner
	1 5:00 – 17:00	Presentation of projects before the jury (experts , teachers, partners)
	17:00 – 17:15	project presentations
	17:15 – 17:30	Announcement of winners and presentation of prizes
	17:30 – 18: 3 0	Closing of ML Week: thanks to participants, organizers and partners, networking
	18:30 – 19:30	Dinner
Departure 01.02.2025	until 12:00	Departure of participants