European Commission

Joint Research Centre

2026 JRC European School Traineeship Programme

15-26 June 2026

Project catalogue

2026

List of projects

01-JRC.C.4	VELA Campus 2026
02-JRC.T.5	Validation contribution to AI model for Internation Trade Data
03-JRC.D.2	Tracking the competitiveness of the EU Blue Economy
04-JRC.B.1	Affordable Dreams? A Small-Scale Study of Housing Affordability comparing Ispra, Varese and Milan
05-JRC.D.1	From Local News to Global Views: Mapping Forests with AI
06-JRC.D.5	AGRI4CAST
07-JRC.F.5	What's in your food?
08-JRC.S.2	Will young people use the Citizens' Engagement Platform?
09-JRC.S.3	By Youth, For Youth: What the Data Tells Us Matters Most
10-JRC.S.4	Co-creation of research on the risks of virtual world platforms
11-JRC.J.3	Safe and Sound!
12-JRC.J.3	Security around us
13-JRC.C.2	The secrets of Photovoltaics
14-OIB.L.3	Support to quality manager
15-JRC.E.2	Galileo: measuring the quality of positioning signals with an app
16-JRC.E.3	Influence of different earthquakes on structural mock-ups
17-JRC.A.5	Shape the Future of Science! Dive into the JRC Publications world and help us making it better!

01-JRC.C.4 VELA Campus 2026

Project description

The JRC C.4 Unit provides scientific support to the EU to move towards a more **Sustainable**, **Smart**, and **Safe mobility**.

Exploiting its testing facilities, 12 Vehicle Laboratories (VELA), it conducts research and vehicle testing (on the road and in the laboratory) related to:

- Tailpipe and evaporative emissions
- Performance of Electromobility3
- Autonomous driving and connected vehicles
- Safety

The students, by participating in the testing procedures, processing and reporting of the results, will understand:

- Various factors affecting vehicle consumption and emissions
- How vehicle safety can be verified
- Intelligent vehicle testing procedures.

3 students

Tasks

- Laboratory and on-road vehicle emissions measurements
- Vehicle safety and intelligent speed assistance (ISA) testing
- Electromagnetic compatibility (EMC) of electrified vehicles
- Automated and connected vehicles
- Human behaviour while driving.

With the tutors' assistance, the students will take part in the set-up of vehicles, preparation, and execution of the tests.

Finally, they will process and visualise experimental data to examine the contribution of different factors to the consumption, emissions, and behaviour of cars and will report the results.

https://joint-research-centre.ec.europa.eu/laboratories-and-facilities/vehicle-emissions-laboratories_en
https://joint-research-centre.ec.europa.eu/system/files/2022-04/Vehicle_Market_Surveillance_Laboratory-Factsheet_202203.pdf
https://joint-research-centre.ec.europa.eu/system/files/2015-10/4_Infosheet_final.pdf

Back to the list of projects

02-JRC.T.5 Validation contribution to AI model for Internation Trade Data

Project description

The project focuses on the adoption and implementation of **supervised machine learning methods** to support decision-making processes of the European Commission in the field of **international trade**. It aims to investigate and develop innovative, intelligent methodologies based on information extracted from large-scale, heterogeneous data sources.

By leveraging advanced data-driven models, the project seeks to uncover deep and often hidden knowledge embedded in complex statistical patterns that are difficult to identify through statistical and analytical approaches, ultimately enhancing evidence-based policy design and trade-related risk assessment.

4 students

Tasks

The four trainees will support the final phase of development and extensive evaluation of a machine learning model based on the extraction of complex indices from continuous numerical bivariate distributions. In particular, they will contribute to the construction of a validation dataset of limited size.
Each trainee will follow a standardized procedure involving the visual classification (labelling) of scatter plots to determine whether a linear trend is present in the data. These scatter plots represent the numerical values of weight and economic value of goods imported into or exported from the EU, as reported in customs declarations.

Back to the list of projects

03-JRC.D.2 Tracking the competitiveness of the EU Blue Economy

Project description

The Blue Economy refers to all the jobs and activities that take place on the sea or benefit from marine resources. This includes fishing, building ships, maritime transport, and coastal tourism, for example. In this project, students will use simple analytical tools to compare the performance of the EU Blue Economy with other parts of the world and identify some key drivers of competitiveness. For example, they will compare how much fish is caught in the EU versus the rest of the world. By the end of the project, students will better understand how the EU's sea-related activities compare globally.

2 students

Tasks

- Definition of the Blue Economy (which activities can be considered "blue")
- Understanding economic concepts, such as productivity and competitiveness
- Exploring different dashboards and types of data, with focus on time series
- Selection of relevant datasets
- Building of a summary indicator starting from the data selected
- Presentation of the results.

Back to the list of projects

04-JRC.B.1 Affordable Dreams? A Small-Scale Study of Housing Affordability comparing Ispra, Varese and Milan

Project description

This project will guide students into the **topic of housing** by exploring data associated to housing demand and supply, as well as costs associated to rent, buy and restore them.

The students will combine data from different sources (e.g. census, Eurostat, commercial providers) to describe housing affordability in specific parts on northern Lombardy (Milan, Varese, Ispra), and then to provide a couple of actionable recommendations for their schoolmates and community stakeholders.

2 students

Tasks

The project will make the student understand the importance of location to housing demand/supply. It will make them look into to data and compare results for three different regions in the north part of Lombardy. If interested other regions can be included. The project will be developed stepwise following questions like:

- What is important when I want to buy a house?
- What are the relevant housing data?
- Are data available for all regions of interests?
- What can we find online (casa.it, immobiliare)?
- What do the results tell us?
- How the compare them? Differences? Similarities?

Back to the list of projects

05-JRC.D.1 From Local News to Global Views: Mapping Forests with AI

Project description

Forests are vital for fighting climate change, but they are increasingly threatened by storms, fires, and pests. When forests suffer, they release carbon, making global warming even worse. Currently, Europe lacks a central system to track these damages.

This project uses AI to bridge the gap. Every day, our algorithms scan thousands of local newspapers for reports of forest loss. We then link these stories to satellite and aircraft images to map where and when damage occurs. By **combining local news with data from space**, we can better protect one of our planet's most important ecosystems.

4 students

Tasks

Help us train AIs to understand how Europe's forests are changing. You'll bridge the gap between local news and satellite data in this hands-on project:

- **Boot Camp**. Introduction to our AI and satellite mapping tools.
- **Media Lab**. Use your native language skills to "teach" the AI. You'll review news articles and provide feedback to improve its accuracy.
- **Space View**. Compare AI-flagged news stories with satellite and aerial imagery to map real-world forest damage.
- **Final Briefing**. Summarize and present your findings

Back to the list of projects

06-JRC.D.5 AGRI4CAST

Project description

AGRI4CAST is a project that monitors the growth and forecasts the yield of 16 key crops (such as wheat, barley, maize, sunflowers, potatoes, etc.) across all EU countries and some agricultural-important nearby regions. It uses satellite images, weather information, and computer models to estimate crop growing conditions.

Each month, the project publishes an agricultural report with updates on crop growth and possible risks due to e.g. droughts or temperature extremes. It also provides free online maps and data for everyone to explore. AGRI4CAST supports policies that keep Europe's food market stable, contributing to food security.

2 students

Tasks

Map & graph design

Review the AGRI4CAST bulletin from a user's point of view:

- Look at the layout, design, and clarity of the information we provide.
- Identify what works well and what could be improved.
- Create a simple mock-up of an improved map or graph layout, showing your ideas for making it easier and more engaging for users.
- Present your recommendations to the team.

Social media communication

Help improve how AGRI4CAST shares information on social media:

- Review our current posts, including the monthly posts on LinkedIn and X. Suggest ways to make messages clearer, more engaging, and visually appealing.
- Create a few sample posts or graphics showing your ideas.
- Present your recommendations and examples.

Analysis of Web Analytics

Enhance understanding of AGRI4CAST's level of public engagement:

- Analysing website traffic and content download statistics via an existing dedicated web portal.
- Produce a set of graphs and charts to present the most updated information available through the portal.
- Share the results with the AGRI4CAST team to improve internal awareness of the group's visibility and outreach.

Back to the list of projects

07-JRC.F.5 What's in your food?

Project description

Food safety, **transparency** and **quality control** are essential to protect consumer health. The terms "Food and Feed" refer to food intended for human and animal consumption, which may contain natural ingredients or industrial treatments.

GMOs (Genetically Modified Organisms) are organisms whose genetics have been altered to improve characteristics such as resistance or productivity. But other elements can come into direct contact with food, such as packaging, utensils or containers. They are called "Food Contact Material". These materials must comply with strict regulations to ensure that they do not release harmful substances into food. Right here at the JRC, our Unit develops cutting-edge biology and chemistry techniques to search for DNA fragments, microplastic traces and anything you would expect to find in your plate — or not. Joining this project, you will learn the ways of the gourmet scientist, swapping the apron for the lab coat, and ensuring you not only enjoy food, but also know what's in it.

2 students

Tasks

The traineeship will be divided in two projects across two laboratories: the **GMO lab** and the **FCM (Food Contact Material)** lab.

- In the GMO lab, students will learn why DNA mutations can be artificially added to the plants we eat, why we make sure we can trace them in supermarkets, and how we do so, combining genetics bench work and bioinformatics techniques.
- In the FCM lab, students will explore the different types of food packaging and harness chemistry techniques to identify what should, and what should not be put in contact with food.

Back to the list of projects

08-JRC.S.2 Will young people use the Citizens' Engagement Platform?

Project description

This project aims to analyse young people's perceptions of the **Citizens' Engagement Platform** (**CEP**) and to gather data and opinions on how to strengthen youth participation.

Students will design and administer an anonymous online survey to a representative sample of the European School of Varese population, followed by systematic analysis of the results. In parallel, the students will conduct a targeted literature and platform review.

The project concludes with a half-day collaborative workshop at the Joint Research Centre, where students will facilitate peer discussions and activities to develop innovative engagement approaches. Findings and recommendations will be consolidated in a final report.

2 students

Tasks

- Empirical Enquiry: Students conduct an anonymous online survey with a sample of young people from the European School of Varese (ESV) population to gather data on their opinion about the Citizens' Engagement Platform (CEP). Students design the survey and evaluate results.
- Workshop at the Joint Research Centre: Organise a half a day workshop with other trainees at the JRC, where students will facilitate discussions, and idea-generation activities to explore innovative ways to engage young people with the CEP.

Back to the list of projects

09-JRC.S.3 By Youth, For Youth: What the Data Tells Us Matters Most

Project description

Students will craft two data-driven stories focusing on contemporary issues critical to their generation. By leading the topic selection, participants ensure an authentic "by youth, for youth" perspective. The project prioritises data literacy, empowering students to use evidence to support narratives and debunk misinformation.

Participants will receive training on data communication and visualisation techniques, learning to transform raw information into compelling, evidence-based stories.

2 students

Tasks

Want to speak up about the challenges your generation actually faces? Join us to create two powerful, data-driven stories on the issues you care about most. You'll choose the topics and learn to design eye-catching visuals that crush fake news and misinformation.

Master the art of data storytelling and gain the skills to back your voice with solid evidence.

- The Brainstorm: Pitch and pick the topics that actually matter to your generation.
- Data Hunting: Learn the art of finding bulletproof sources.
- Visual Lab: Learn the secrets of turning numbers into killer charts and graphics.
- The Storyboard: Map out your narrative and find your unique angle to hook the audience.
- Creative Production: Bring your data stories to life—writing, designing, and assembling your masterpiece.
- Final Polish: Peer review, final edits, and getting your stories ready to be shared with the world.

Workshop on Visual Lab: How to turn numbers into valuable charts and graphic.

Back to the list of projects

10-JRC.S.4 Co-creation of research on the risks of virtual world platforms

Project description

One of the main objectives of the VirtueS project "Virtual Worlds & Society" is to understand the potential risks (and benefits) of emerging virtual worlds, including applications in gaming and social interaction (e.g., Roblox, Fortnite, Minecraft) and virtual reality applications (e.g., Rec Room, VRChat), including their impact on children and young people.

Potential risks of these applications include exposure to inappropriate content, harassment and cyberbullying, and addictive use, while some potential benefits may involve socialization and social connection, entertainment, fostering creativity, and learning technical skills.

The project employs qualitative approaches (such as individual or group interviews, i.e., focus groups) with users of these applications to understand their own perceptions of how these platforms affect them.

4 students

Tasks

The students in this project will take part in co-creating qualitative research activities within the scope of the project, potentially including:

- Collaborating in the design of user interviews and focus groups; identifying variables and topics of interest; formulating research questions; and addressing ethical and privacy protection issues.
- Designing workshops (for all students) for the discussion and interpretation of results related to identifying risks and benefits.
- Discussing potential solutions (e.g., age gating, content moderation, age-appropriate design, etc.).
- Designing activities for communicating and disseminating results (What is the best way to communicate the findings of this project to children, adolescents, and adults?).

>> There is a possibility of continuous collaboration if the trainees are interested in crafting a submission for the 2027 "ACM Interaction Design and Children (IDC)" conference under the "Research and Design Challenge." For illustration, the call for 2026 is available here: https://idc.acm.org/2026/calls/rd-challenge/.

Back to the list of projects

11-JRC.J.3 Safe and Sound!

Project description

To get a general overview of the **Safety and Environmental Protection** as well as of **Emergency Management** of the site, the trainees will spend their time with the various services.

They will follow:

- The Emergency Preparedness Service and the Firefighters to learn about the Emergency and Incident Management,
- The Inspection Service concerning construction yards and building inspections,
- The Environmental Protection learning about EMAS, waste management and the green areas and
- Safety Office concerning Legislative framework, Risk Assessments, Consultation Procedure and Training.

2 students

Tasks

- EU Safety Agency
- Safety Office activities
- Safety technician activity
- ISO 45001 Management System and KPI evaluation
- Fire drill exercise
- Courtyard management
- Emergency Management & Emergency preparedness
- ERSS fire drillERSS activities & Services organization
- Environmental Protection and EMAS activities
- Real inspection
- ERGONOMICS procedure in Ispra Site

Back to the list of projects

12-JRC.J.3 Security around us

Project description

To get a general overview of **Security Service of JRC Ispra Site**, the trainees will spend their time learning about:

1. How people (staff and visitors) are welcomed at the JRC Ispra site, entrance procedures - all what needs to be done (this would include SECPAC in general, group management, Third Country Nationals, etc.).
2. Perception of the threats to the site (type, level, characteristics, countermeasures).
3. Physical security - why we have various areas and zones?
4. How maintaining an adequate level of security be influenced by disruptive technologies like Foreign Interference, Artificial Intelligence and others.
5. Security Awareness ideas (leaflets, posters, other material, etc.).

2 students

Tasks

The proposed activities will be very practical and hands-on.

Back to the list of projects

13-JRC.C.2 The secrets of Photovoltaics

Project description

The project consists of a series of activities at the ESTI laboratories, one of the **world top-level research laboratories in photovoltaics (PV)**.

Aim of the project is to understand how PV modules work, how much energy they can produce in real-life, how solar radiation is measured by working together with the laboratory staff in the full characterization of a PV module, using solar simulators, high precision equipment, and advanced data analysis techniques.

Future PV technologies, not yet appeared on the market, will be shown.

An introduction to the metrology lab and the solar radiation lab is also included.

At the end of the stage, the students will have a better overview of PV, the newest technologies at the forefront of research, how the performance of PV modules is measured and how the produced energy is calculated (PV-GIS).

This project is intended for students with passion in mathematics and physics, and a genuine curiosity for new things.

2 students

Tasks

The activities will be performed indoor using different top-class solar simulators to measure the current-voltage (I-V) curve and the spectral response curve (SR) of a PV module. With these data, the spectral correction will be calculated as well, to determine the absolute values at Standard Test Conditions (STC). An introduction to the statistical estimation of measurement uncertainties will also be given to students with a passion in statistics and mathematics.

In parallel, the students will undergo activities in the metrology lab (traceability to SI units of Voltage, Current, Resistance and Temperature using high precision equipment); the solar radiation lab will also be introduced (pyranometers, pyrheliometers, cavity radiometers, spectroradiometers) to better understand the solar energy.

The energy produced by a PV system on the rooftop of the student's house will be calculated in detail using the PV-GIS tool, explaining the most critical aspects to be considered when planning the installation of a home PV system.

If allowed by the scheduling, for students familiar with coding in a language of their preference, the development of a script to analyse the acquired data will be proposed.

Back to the list of projects

14-OIB.L.3 Support to quality manager

Project description

The students will gain an overview of the daily management of social infrastructure at the European Commission Ispra site. Two main areas of work:

Quality and Safety - accompanying staff responsible for ensuring standard of safety and quality in the JRC Ispra site related to the activities of the unit: lodgings, catering and childcare.

- Quality and Safety involves some theoretical learning about the main principles of legislation related to safety at work and requirements to obtain quality certifications such as ISO or EMAS (environmental standards) as well as practical activities to understand the challenges linked to such a job (including overviewing and following-up to infrastructure and maintenance works etc.).

Lodgings – supporting a team of 4 colleagues responsible for the management of 72 apartments rented out to JRC staff on a temporary basis.

- The students will be able to follow all the back and front-office activities leading to renting out an accommodation using dedicated software for allocation, check-in, support to tenants, check-out, billing, inventory, etc.

Depending on time availability and interest, it could be possible to support also the team dealing with purchase of goods and services, discovering the different steps of procurement.

2 students

Tasks

- Intro to Ispra site and to OIB.LS.3 – Visit of the facilities
- Principles of Quality certification – link to EU policies
- Support to checks and follow-up of work requests
- Principles of Safety - Infrastructure
- Support to checks and follow-up of work requests
- Lodgings – presentation of the service and visit of the facilities
- Accompanying staff for check-ins and check-outs foreseen for the day
- Support to inventory of accommodations
- Support to maintenance, purchases and billing
- Support to statistics of the service.

Back to the list of projects

15-JRC.E.2 Galileo: measuring the quality of positioning signals with an app

Project description

In our connected world, we are daily using services providing us with precise positioning (e.g., for localisation of our position), reliable navigation (e.g., for car driving), and accurate timing (e.g., for financial transactions). These Positioning, Navigation, and Timing (PNT) services are offered by Global Navigation Satellite Systems (GNSS), as the European Galileo and the US GPS.

GNSS signals are transmitted wirelessly using radio signals and can be subject to disruption, caused by radio interference. This disruption may be intentional, unintentional (e.g. malfunctioning electronic equipment), or caused by natural phenomena (e.g. solar flares). The disruption can cause a loss or incorrect information about the position and time.

The scope of the activity is to monitor the quality of the GNSS signal, using a mobile app. During the traineeship, the students will work closely with the team in unit JRC E.2 to conduct measurements at the JRC campus site. Students will learn the basics of radio transmission and GNSS. They will actively participate in a campaign of tests to verify the quality of the signal transmissions, using a dedicated mobile app, and will report on the results of the activity. The aim is to provide students with hands-on experience by collecting data using a simple app and processing it for practical evaluation of the quality of service and to expose them to testing methodology.

2 students

Tasks

The following tasks will be performed under supervision of the tutors in JRC E.2:

- Familiarize with the basic concepts of radio transmission: how information is transmitted via radio, how radio signals propagate and basic of mobile communication.
- Hands-on experiments: familiarize with the mobile apps to be used for GNSS signal monitoring, perform tests within the JRC Ispra campus, and collect measurements.
- Post-processing of the collected data using software tools.
- Report on the activity and measurements.

Back to the list of projects

16-JRC.E.3 Influence of different earthquakes on structural mock-ups

Project description

The project aims to explain to students the structural behaviour of buildings and civil structures in general, focusing on seismic effects and illustrating the basics of modern earthquake engineering. This will be achieved using Mola® structural kits mock-ups (https://molamodel.com/) and a small demonstration bench capable of reproducing earthquake actions. Students will understand the effects of the main seismic parameters (frequency content and amplitude) on typical civil structures and the design strategies to reduce/mitigate the earthquake effects.

The proposal includes hands-on interaction with the possibility to take short photo or video content illustrating the dynamic experiments. (An example of a static experiment is shown here: https://player.vimeo.com/video/104801410).

4 students

Tasks

The students will work on a small demonstration bench able to reproduce the actions of earthquakes on reduced mock-ups of civil structures (buildings, bridges, etc.) using mola® structural kits (https://molamodel.com/). The students will assemble the different structures proposed and then they will test them applying different accelerograms or removing/adding some components (to modify the mock-up structural behaviour) in order to practically understand the basis of earthquake design.

In a second step, the students will have the possibility to develop their own structures and to test choosing a suitable accelerogram.

Back to the list of projects

17-JRC.A.5 Shape the Future of Science! Dive into the JRC Publications world and help us making it better!

Project description

Ever wondered how JRC research reaches the world? Join our team and go behind the scenes of JRC scientific publishing. In this flexible traineeship, **you are in the driver's seat**. We manage everything from web design to quality control, and we want **your fresh perspective**.

Love technology and design? Help us redesign our website or streamline our publication form. Have an eye for detail? Learn the secrets of quality checking. Prefer presentations and teaching? Improve our training tools. You can mix and match tasks to suit your rhythm and interests. Gain experience while making science more accessible and helping us innovate. **We can't wait to meet you!**

2 students

Tasks

Customise your two-week experience **by choosing** from these key projects:

- **Web & User Interface design**: Help us redesign the JRC Publications website and/or submission form. We will show you the basics to get you started. Do it on paper or learn how to use User Interface applications.
- **Communication**: Review "Getting started" training and presentation to help authors succeed. Learn how to give impactful presentations and trainings.
- **Quality Assurance**: Learn the secrets of quality-checking scientific work before it goes live. Practice quality checks on scientific publications (scientific knowledge not needed).

Before diving into your tasks, we will explain how it works and guide you. We're there to help you learn and make the most out of your traineeship.

Back to the list of projects

Science for policy

The Joint Research Centre (JRC) provides independent, evidence-based knowledge and science, supporting EU policies positively impact society

Scan the QR code to visit:
The Joint Research Centre: EU Science Hub
https://joint-research-centre.ec.europa.eu