



2020-IPR-A5-FGIV-015649

**FGIV - PROJECT OFFICER - SCIENTIFIC /
TECHNICAL SUPPORT OFFICER -
EXPLORATORY RESEARCH PROJECT -
IMPACT ASSESSMENT OF PANDEMICS THROUGH BIG
DATA ANALYTICS RESEARCH (IMPARA)**

<p>Position for:</p> <p>FG IV - Project Officer - Scientific/Technical Support Officer</p>	<p>As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at http://ec.europa.eu/jrc/</p> <p>The JRC offers a vacancy for a Contract Agent within the Exploratory Research Project IMPARA (IMpact assessment of PANdemics through big data analytics ReseArch).</p> <p>The JRC Exploratory Research Programme (ER) is a strategic initiative characterised by ideas that might lead to novel results to qualitatively enrich current JRC scientific work.</p> <p>The vacancy is within the Directorate for Competences. The directorate operates Competence Centres to develop, provide and apply analytical tools, methods and integrated solutions to better support the Commission Services for the conception, implementation and evaluation of EU policies. The operational scientific research will take place in the unit Text and Data Mining, which aims to develop, provide access to, and apply text and (big) data mining, management and analysis.</p> <p>The ER Project IMPARA will be hosted by the Big Data Analytics project, and will exploit the Big Data Analytics Platform (BDAP) and expertise related to big data analysis to study connections related to the effectiveness of the mitigation measures during the COVID-19 pandemic.</p> <p>The project takes stock on the combined negative impacts a pandemic may have on society; the direct impact related to the health effects of the pathogen itself, and the secondary impact from the measures put in place to mitigate the spread of the pathogen, such as confinement, quarantine and restricted mobility. Examples of the latter include loneliness during quarantine period, professional inactivity, effects on mental health, postponement of cancer treatments and surgeries, etc.</p> <p>Finding the right balance between strict measures that mitigate the spread of a pathogen and limiting the collateral damage of the measures is a challenging task. The aim of this exploratory research project is to provide scientific evidence on how to find that balance.</p>
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	<p>The selected candidate will be in charge of carrying out all aspects of the IMPARA project, this includes:</p> <ul style="list-style-type: none"> • Collecting, preparing and analysing structured and unstructured data from various sources, including • mobility data, national public health authorities and other platforms that collect information relevant for the mitigation strategies, social media, and geo-spatial data; • Producing indicators for the effectiveness of mitigation measures based on the collected data in a multidisciplinary approach; • Studying and comparing different epidemiological models to simulate the evolution of an epidemic, e.g., agent-based, Susceptible-Infectious- Recovered (SIR), and multi-parametric models; • Applying machine learning (ML) techniques to assess the importance of the variables that impact the spread of the disease; • Including social media data to pick up early signals from sentiment analysis, e.g., to predict social behaviour that put mitigation measures such as social distancing at risk; • Applying data science technologies such as interactive dashboards based on Jupyter notebooks and containing text, graphics, formulas, as well as user interface components (like buttons, checkboxes, sliders), dynamic plots, and interactive maps; • Dissemination/publication of results. <p>Qualifications:</p> <p>Essential:</p> <ul style="list-style-type: none"> • A doctoral diploma in data science or related field, alternatively completed university studies of at least three years attested by a diploma and at least five years professional experience in a field relevant to the position; • Experience with state-of-the-art data science techniques including deep learning frameworks; • Extensive experience with Python programming language and open-source data science packages; • Hands-on experience with mathematical modelling and machine/deep learning. <p>Advantage:</p> <ul style="list-style-type: none"> • Practical experience with the analysis of data associated with a geolocation; • Experience with Unix/Linux environment; • Experience with sentiment analysis based on social media data; • Experience with epidemiological models; • Solid record of research activities relevant for the post including publications in international peer-reviewed journals. <p>Good oral and written communication skills in English</p>
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	<p>(B2) are essential. Knowledge of other languages is an advantage.</p> <p>Furthermore, team spirit and the capability of working in an international/multicultural environment are required.</p> <p>The Joint Research Centre is an equal opportunity employer and is committed to increasing the diversity of its staff. It welcomes applications from women and minority groups.</p>
<p>Directorate Unit</p> <p>Project</p>	<p>Competences Text and Data Mining</p> <p>The Scientific Development Unit of the Directorate for Strategy and Work Programme Coordination is in charge of the overall JRC Exploratory Research Programme.</p> <p>The operational scientific research will take place in the Text and Data Mining Unit in Ispra (Italy).</p> <p>Exploratory Research Project: IMPact assessment of PAndemics through big data analytics ReseArch (IMPARA) within the project Big Data Analytics</p> <p>Further information is available at: https://ec.europa.eu/jrc/en/about/jrc-in-brief</p>
Indicative Duration	24 months
<p>JRC Site</p> <p>Country</p>	<p>Ispra</p> <p>Italy</p>
Rules and eligibility	<p>The candidate must be on a valid EPSO reserve list for Function Group IV contract staff.</p> <p>If you are not in any valid EPSO reserve list for Function Group IV contract staff, you can still apply by following these steps.</p> <p>You express your interest by applying to the CAST Permanent or to the permanent JRC Call for researchers.</p> <p>1. CAST Permanent: open-ended selection procedure to create a pool of candidates from which the institutions, bodies, offices and agencies of the European Union (EU) can recruit contract agents. https://epso.europa.eu/documents/2240_en</p> <p>2. JRC Call COM/1/2015/GFIV – Research: open-ended selection procedure to create a pool of candidates from which mainly the JRC can recruit contract agents FGIV as researchers. Details available at the link below: https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-IV-researchers</p>

Only then you can apply for this specific position, through <http://recruitment.jrc.ec.europa.eu/?type=AX>

Auxiliary contract staff:

<https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/contract-staff-members>

Article 3b of the Conditions of Employment of Other Servants of the European Union applies: the actual period of employment within the Commission under this type of contract, including any period under renewal, shall not exceed 6 years.

Please note that in case a high number of applications is received only shortlisted candidates will be contacted.