EUROPEAN COMMISSION

JOINT RESEARCH CENTRE

2019-IPR-I3-FGIV-012093	**FG IV IT Project Officer –Scientific Research on Machine Learning and Deep Learning for Text Analytics**

| **Position for:**

FG IV – IT Project Officer – Scientific Research | 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.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: https://ec.europa.eu/jrc/

In the Directorate for Competences, the Text and Data Mining unit aims to develop, provide access to, and apply text and (big) data mining, management and analysis. The Unit also provides: (i) guidance on the use of statistical data mining methods as well as text mining and analysis techniques for information extraction; (ii) one-stop-shop for tools, services and training for the EU institutions and strategic partners to support their needs in the fields of open sources intelligence, media monitoring, information harvesting and analysis as well as innovation monitoring, statistical data mining and visualisation; (iii) set-up of Competence Centres in these areas as appropriate.

The Text Mining & Analysis Competence Centre is an in-house consultancy and innovation service supporting EU Institution's Policy Makers, Investigators and Analysts in their knowledge-intensive tasks by providing consultancy and advanced analytical tools in the field of text mining.

We offer a position for a research fellow in Machine Learning and Deep Learning for Text Analytics to explore original methodologies and techniques for automation of searching and extraction of structured information from massive text collections.

The successful candidate will contribute to the enrichment of the various text mining tools developed by the Unit for processing vast amounts of textual data, including legal acts, investigation material, news and social media postings, by exploration and integration of machine learning-based methods to automate the process of adaptation of the aforementioned tools to processing texts in new domains and languages and whenever possible through exploiting user feedback and via analysis of user behaviour logs.

The candidate will carry out research in at least one of the following areas:
1. Creation and use of Semantic Vector Spaces for Natural Language Processing, development of algorithms involving (multilingual) Word Embeddings as part of Text Mining applications.
2. Machine learning-based methods for text classification, terminology extraction, text clustering, and text similarity computation,
3. Active learning (based on user feedback),
4. Domain-adaptive Cross-lingual information classification. |

	The successful candidate will also carry out the following tasks:
	1. Development of software components based on the results of the research above and integrate them in existing text mining toolkits and applications,
	2. Publish research results in peer-reviewed scientific conferences and journals,
	3. Provide advice to internal and external stakeholders on state-of-the-art methods and results in this specific area.
	Qualifications:
	• MSc and/or PhD in Computer Science, Artificial Intelligence, Computational Linguistics, Statistics or related areas.
	• At least three years of job related experience with postgraduate hands-on experience:
	1) In programming
	2) With some state-of-the-art machine learning toolkits, in particular, in the context of elaborating solutions for Natural Language Processing based on Semantic Vector Spaces and Word Embeddings.
	• Proven publication track in peer-reviewed scientific conferences and journals,
	• Good communication skills
	It would be an asset to have:
	• Demonstrated skills in development of tools and applications that exploit machine learning-based solutions in Java and/or Python,
	• Hands-on working experience in the context of analysis of user behaviour patterns and logs,
	• Acquaintance with neural networks and deep learning methods,
	• Experience of working in a multilingual environment.
	Very good knowledge of English (B2 level) is required.
Directorate **Unit**	Competences Text and Data Mining Further information: https://ec.europa.eu/jrc/
Indicative duration	36 months initial contract with possible renewals up to maximum 6 years
JRC Site	Ispra
Country	Italy
Rules and eligibility	The candidate must be on a valid EPSO reserve list for Function Group IV contract staff. If you are not in any valid EPSO reserve list for Function Group IV contract staff, you can still apply by following these steps. You express your interest by applying to the CAST Permanent or to the permanent JRC Call for researchers. 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
	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
	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.