



Luxembourg, 24/03/2020

REF.: **CDT-AD5-2020/02**
MACHINE LEARNING SPECIALIST

GRADE: **AD5**
DEPARTMENT: **TRANSLATION SUPPORT DEPARTMENT**
PLACE OF EMPLOYMENT: **LUXEMBOURG**

The Translation Centre for the Bodies of the European Union was established in 1994 to provide translation services for the various bodies of the European Union. It is based in Luxembourg. Since its establishment, the Centre's workload has increased considerably, and it now employs around 200 staff.

To meet the needs of the Translation Support Department, and in particular of the Business Development and Workflow Support Section, the Translation Centre is organising a selection procedure to establish a reserve list for the recruitment of temporary staff members under Article 2(f) of the Conditions of Employment of Other Servants of the European Union¹ for the following activities:

NATURE OF THE TASKS

Reporting directly to the Head of the Business Development and Workflow Support Section, the selected candidate will be responsible for performing the following tasks:

- Implement, improve and maintain custom neural machine translation (NMT) engines based on existing open-source toolkits.
- Develop, improve and maintain data processing pipelines for its use in neural networks architectures, including cleaning, transforming and mapping existing data sources.
- Carry out and monitor NMT-related processes, including engine tuning, training, evaluation and deployment.
- Conduct development activities in order to extend and optimise current capabilities in relation to machine translation and other neural systems, including but not limited to domain adaptation.
- Draft specifications and recommendations for custom components related to machine translation and machine transcription workflows.
- Draft technical documentation and procedures for the maintenance, deployment and use of the components and systems developed by the team.
- Technology watch activities in the field of artificial intelligence (AI) applied to machine translation, speech recognition and natural language processing (NLP).
- Analyse, process and exploit data by means of unsupervised and supervised techniques.

¹ The same reserve list may be used for the recruitment of temporary staff under Article 2(b) of the Conditions of Employment of Other Servants of the European Union.

- Advanced and automated acquisition and management of data sources for improving existing systems.
- Provide support to the IT and Translation Support departments in relation to the existing integrations in the area of machine learning.
- Apply and follow existing conventions and standards in the field of machine translation and data mining.
- Perform other NMT and NLP-related tasks as requested.

1. SELECTION CRITERIA:

To be eligible to take part in this selection procedure, the applicant must, on **27/04/2020**, the closing date for applications, meet the following requirements:

a) ELIGIBILITY CRITERIA:

- be a national of one of the Member States of the European Union;
- have a level of education which corresponds to completed university studies of at least three years attested by a diploma²;
- language skills: thorough knowledge of one of the official languages of the European Union and a satisfactory knowledge of another official language of the European Union to the extent necessary for the performance of the duties.

b) ESSENTIAL TECHNICAL COMPETENCES:

- At least one year of proven professional experience in machine learning or natural language processing;
- Good knowledge of neural networks and machine learning techniques and tools, including descriptive and predictive models, standard libraries and platforms;
- Strong experience of working with scripting languages (Python, Bash);
- Good knowledge of packaging methods and practices for executables (scripts and/or binary) to ensure repeatability and continuity of operations on production environments;
- Good knowledge of Unix (Ubuntu, Red Hat).
- Good knowledge of information system security practices.

c) DESIRABLE COMPETENCES:

- Experience with neural machine translation implementations;
- Experience with text data processing pipelines;
- Experience with open source machine learning libraries (Tensorflow/Keras, Pytorch);
- Knowledge or experience with natural language processing techniques;

² Only diplomas and certificates that have been awarded in EU Member States or that are the subject of equivalent certificates issued by authorities in the said Member States shall be taken into consideration.

- Knowledge or experience with speech recognition applications;
- Knowledge of any other programming language (Java, C#, C++, R, Matlab, Javascript);
- Knowledge or experience with version control systems (e.g. GIT);
- Experience or certifications on cloud-based computation and storage services (AWS, Azure);
- Knowledge or experience on standard processes for data mining (CRISP-DM, ASUM-DM);
- Professional experience of at least 6 months in an EU institution, agency or body or international organisation in the area of expertise;
- Knowledge of translation standards (XLIFF, TMX);
- Scientific publications in the fields of Artificial Intelligence or Natural Language Processing.

d) **ESSENTIAL NON-TECHNICAL COMPETENCES:**

- Written and oral communication: good drafting and summarising skills; ability to communicate well at all levels (internal and external) and in a multilingual environment.
- Interpersonal skills: ability to work individually and collectively in a team and in a standardised technical environment.
- Sense of responsibility: discretion, confidentiality, precision, efficiency, availability and punctuality, respect of security rules and technical constraints.
- Organisational skills: ability to manage various tasks and to set priorities; methodical approach; ability to take initiative; versatility.
- Adaptability: ability to help others and to work well under pressure; ability to upskill and adapt to developments in the IT environment.

These skills will be assessed during the written test and the interview (see point 2(b)(i),(ii) below).

2. **SELECTION PROCEDURE:**

a) **PRE-SELECTION STAGE:**

The pre-selection stage will be carried out in two parts:

- the first part will be based on the above-mentioned eligibility criteria (point 1(a)), and is intended to establish whether the applicant meets all the mandatory eligibility criteria and all formal requirements laid down in the application procedure. Applicants who do not meet these requirements will be rejected;
- the second part will take into consideration professional experience and other points indicated under 'Essential technical competences' and 'Desirable competences' (points 1(b), (c)). This part will be marked on a scale from 0 to 20 (pass mark: 12).

The Selection Committee will invite for a written test and an interview the 10 applicants who pass the pre-selection stage and obtain the best marks.

b) SELECTION STAGE:

The selection stage follows the procedure described below. It will be carried out in two parts:

(i) A written test (in English or French) consisting of:

- a practical computer-based test to assess applicants' knowledge in the data, information and knowledge management areas of specialisation.

Time allowed: 2 hours.

The written test will be marked out of 20 (pass mark 12).

Applicants may choose either English or French for the written test. Please note that applicants whose main language is French must sit the tests in English and those with English as their main language must choose French.

(ii) An interview with the Selection Committee to assess applicants' ability to carry out the duties described above. The interview will also focus on applicants' specialist knowledge and their competences listed under points 1(b), 1(c) and 1(d).

The interview will take place on the same day as the written test or the following day(s).

Time allowed: approximately 40 minutes.

The interview will be marked out of 20 (pass mark: 12)

The written test and the interview will take place in Luxembourg.

Once the written test and the interview have been marked, the Selection Committee will draw up a reserve list with the successful applicants in alphabetical order. Successful applicants are the applicants with both an aggregate pass mark in the written test and a pass mark in the interview (see points 2(b) (i) and 2(b) (ii)). Applicants should note that inclusion on a reserve list does not guarantee recruitment.

Those applicants who are invited to the tests must submit, on the day of the interview, the relevant supporting documents corresponding to the information entered on the application form, namely copies of diplomas, certificates and other supporting documents proving their qualifications and professional experience and clearly showing start and end dates, the function and exact nature of their duties, etc.

However, before a contract can be concluded, the selected applicants will have to provide the originals and certified copies of all relevant documents proving eligibility criteria.

The reserve list will be valid for 12 months from the date of its establishment and may be extended at the discretion of the Translation Centre's Authority authorised to conclude contracts of employment.

3. RECRUITMENT:

Depending on the budgetary situation, successful applicants may be offered a three-year contract (renewable) in accordance with the Conditions of Employment of Other Servants of the European Union. Subject to the level of confidentiality of the work carried out, the selected applicant may be required to apply for security clearance.

The selected applicants will be recruited in the function group/grade AD5. The basic monthly salary for the grade AD5 (step 1) is EUR 4 883.11. In addition to the basic salary, members of staff may be entitled to various allowances, such as a household allowance, an expatriation allowance (16% of basic salary), etc.

In addition, in order to be eligible and before being appointed, the selected applicant must:

- have fulfilled any obligations imposed on them by the law concerning military service;
- meet the character requirements for the duties involved (enjoy full rights as a citizen)³;
- undergo a medical examination arranged by the Translation Centre in order to satisfy the requirements of Article 12 (2) of Conditions of Employment of Other Servants of the European Union.

4. APPLICATION PROCEDURE:

Interested applicants should complete their online application in time.

We strongly advise applicants not to wait until the last few days to apply. Experience has shown that the system may become overloaded closer to the closing date for applications. It may therefore prove difficult to apply in time.

³ Applicants must provide an official certificate confirming that they do not have a criminal record.

EQUAL OPPORTUNITIES

The Translation Centre is an equal opportunities employer and recruits applicants irrespective of age, race, political, philosophical or religious convictions, gender or sexual orientation, handicap, marital status or family situation.

INDEPENDENCE AND DECLARATION OF INTEREST

The jobholder will be required to make a declaration of commitment to act independently in the public interest and to make a declaration in relation to any interests that might be considered prejudicial to his/her independence.

5. GENERAL INFORMATION:

REVIEW – APPEAL – COMPLAINTS

Applicants who consider that they have grounds for complaint concerning a particular decision may, at any point in the selection procedure, request further details regarding said decision from the Chair of the Selection Committee, instigate an appeal procedure or file a complaint with the European Ombudsman (see Annex I).

REQUESTS FROM CANDIDATES FOR ACCESS TO INFORMATION CONCERNING THEM

Applicants involved in a selection procedure have the specific right of access to certain information concerning them directly and individually. Applicants who so request may accordingly be provided with supplementary information relating to their participation in the selection procedure. Applicants must send such requests in writing to the Chair of the Selection Committee within a month of being notified of their results in the selection procedure. The answer will be sent within one month. Requests will be dealt with taking account of the confidential nature of the Selection Committee proceedings under the Staff Regulations.

PROTECTION OF PERSONAL DATA

The Translation Centre (as the body responsible for organising the selection procedure) will ensure that applicants' personal data are processed as required by Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (OJ L 295, 21.11.2018, p. 39). This applies in particular to the confidentiality and security of such data.

Candidates have the right to have recourse at any time to the European Data Protection Supervisor (edps@edps.europa.eu).

Please see the [specific privacy notice](#).

ANNEX 1 REQUESTS FOR REVIEW – APPEAL PROCEDURES – COMPLAINTS TO THE EUROPEAN OMBUDSMAN

Since the Staff Regulations apply to selection procedures, please note that all proceedings are confidential. If at any stage of this selection procedure applicants consider that their interests have been prejudiced by a particular decision, they may take the following action:

I. REQUESTS FOR FURTHER INFORMATION OR FOR REVIEW

- Send a letter requesting further information or a review and stating your case to:
For the attention of the Chair of the Selection Committee CDT-AD5-2020/02
Translation Centre
Bâtiment Drosbach
Office 3076
12 E, rue Guillaume Kroll
L-1882 Luxembourg

within 10 calendar days of the date of dispatch of the letter informing them of the decision. The Selection Committee will send a reply as soon as possible.

II. APPEAL PROCEDURES

- Lodge a complaint under Article 90(2) of the Staff Regulations of Officials of the European Union at the following address:
For the attention of the Authority authorised to conclude contracts of employment
CDT-AD5-2020/02
Translation Centre
Bâtiment Drosbach
Office 3076
12 E, rue Guillaume Kroll
L-1882 Luxembourg

The time limits for initiating these two types of procedure (see Staff Regulations as amended by Regulation (EU, Euratom) No 1023/2013 of the European Parliament and of the Council (OJ L 287 of 29.10.2013, p.15 – <http://eur-lex.europa.eu/homepage.html>) start to run from the time applicants are notified of the act allegedly prejudicing their interests.

Please note that the Authority authorised to conclude contracts of employment does not have the power to amend the decisions of a Selection Committee. The Court has consistently held that the wide discretion enjoyed by Selection Committees is not subject to review by the Court unless the rules which govern the proceedings of Selection Committees have clearly been infringed.

III. COMPLAINTS TO THE EUROPEAN OMBUDSMAN

- Applicants can make a complaint to the:
European Ombudsman
1 avenue du Président-Robert-Schuman – BP 403
F-67001 Strasbourg Cedex

pursuant to Article 228(1) of the Treaty on the Functioning of the European Union and in accordance with the conditions laid down in Decision 94/262/ECSC, EC, Euratom of the European Parliament of 9 March 1994 on the regulations and general conditions governing the performance of the Ombudsman's duties (OL L 113 of 4 May 1994, p. 15).

Please note that complaints made to the Ombudsman have no suspensive effect on the period laid down in Articles 90(2) and 91 of the Staff Regulations for lodging complaints or for submitting appeals to the Court of Justice of the European Union under Article 270 of the Treaty on the Functioning of the European Union. Please also note that, under Article 2(4) of the Decision 94/262/ECSC, EC, Euratom of the European Parliament of 9 March 1994 on the regulations and general conditions governing the

performance of the Ombudsman's duties, any complaint lodged with the Ombudsman must be preceded by the appropriate administrative approaches to the institutions and bodies concerned.