



معهد قطر لبحوث الحوسبة
Qatar Computing Research Institute

عضو في مؤسسة قطر
Member of Qatar Foundation

Software Engineer- Arabic Language Technologies

Qatar Computing Research Institute (QCRI) is seeking candidates for Software Engineer to work within our [Arabic Language Technologies](#) team. We offer unique opportunities for strong careers spanning basic and applied research in the areas of language technologies, including Natural Language Processing and Information Retrieval with particular emphasis on Language Understanding and Machine Translation

The research of the ALT team focuses on the following areas:

- Information Extraction and Retrieval based on deep linguistic analysis and natural language comprehension. This includes developing a flexible pipeline of NLP and IR components that can be used to build and deploy state-of-the-art systems such as question answering, textual entailment, paraphrasing, and summarization, among others.
- Multilingual speech and text processing, which includes speech recognition (especially for Arabic and its dialects, and English) and machine translation, with applications such as lecture translation, translation for medical and tourist domains, and supportive tools for professional translators and interpreters.
- Optical character recognition for historic documents, especially for Arabic heritage material.
- NLP/IT for education, in particular the development of an Arabic e-book reader and explorations in computer assisted language learning.

ALT bases its research on empirical and machine learning-based approaches, focusing on aspects such as robustness, portability, adaptation and multilinguality (making progress in parallel in English and Arabic).

Knowledge of Arabic is not required but is considered a plus. Having background in any of the following topics related to machine learning is valued as well:

Discriminative learning, including SVMs and other max-margin approaches / Graphical models / Structure learning for sequence tagging, segmentation, parsing, etc. / Advanced data representation through kernel methods and kernel machines / Online learning and active learning / Semi/Weakly/Un-Supervised learning / Domain adaptation, multi-task and transfer learning in NLP / Relational learning / Clustering approaches / Language modelling: factored, continuous space LMs

QCRI strives to become the regional and global leader in Arabic language technologies – in the areas of search, information retrieval and analysis, multilingual language processing, advanced machine translation and also leading efforts to increase and enrich Arabic language content online.

Job Description:

- Software Engineers are expected to work in research teams, where they design, implement, and maintain software that is part of the research conducted by the team. Software Engineers may also be responsible for maintaining research infrastructure and running user-facing software services. They are expected to collaborate with researchers in developing research ideas and intellectual property in the form of disclosures and patent applications.
- Software Engineers are expected to contribute towards the research efforts of QCRI and to develop the necessary expertise to tackle the challenges of interest.

Education and requirements:

- BSc in computer science or a related field from a top-tier institution

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- MSc or PhD a plus
- Strong record of major accomplishments
- Strong communication and collaboration skills

Desired technical skills– a good subset of the following:

- Strong programming skills in Java and/or C++
- Fluency in at least one scripting language (e.g., Python, Perl, or Ruby)
- Use of NLP toolkits, e.g., NER, pos-tagger, syntactic parsers, Stanford NLP toolkits, open NLP
- Use of NLP machine learning toolkits, e.g., Weka, SVM-light, LIBSVM
- Experience with open source speech recognition and machine translation systems (Kaldi, Moses, ...)
- Basic knowledge of UIMA or willing to learn UIMA
- Expertise in Information Retrieval and search, e.g., search engines, web crawling, data cleaning
- Expertise in Linux/Unix
- Experience with distributed programming models such as Hadoop or MPI
- Experience with cloud technologies such as Amazon Web Services or OpenStack
- Cluster management

Research at QCRI:

[QCRI](#) supports Qatar Foundation’s mission by helping to build Qatar’s innovation and technology capacity. It is focused on tackling large-scale computing challenges that address national priorities for growth and development. Moreover, QCRI is a national research institute conducting world-class applied computing research that transforms the way we interact with each other, enables new discoveries, and accelerates development of society.

A proud member of [Qatar Foundation for Education, Science and Community Development](#), QCRI is building a multidisciplinary research group in computer science with passion for innovation and excellence in research. The QCRI research program offers a collaborative, multidisciplinary team environment, endowed with a comprehensive support infrastructure.

Research in Qatar:

Qatar has made a commitment to be a leading center for research and development excellence and innovation. Home to a globally regarded scientific research funding organization, a world-class hub for technology innovation and commercialization, and prominent research institutes operating at the frontiers of science, Qatar Foundation Research and Development is spearheading a national endeavor to fulfill this commitment.

The country is home to branch campuses of numerous world-renowned universities such as Carnegie Mellon University, Texas A&M University and Georgetown University, major oil and gas companies, telecommunication companies, and international media organizations such as Al Jazeera. These local institutions offer opportunities for research collaboration to tackle new computing research challenges of practical importance.

Package:

QCRI offers a unique opportunity for strong research careers and a highly competitive compensation package including attractive tax-free salary and additional benefits such as furnished accommodation, excellent medical insurance, annual paid leave, and more.

To apply, please [click here](#) and select “Software Engineer – Arabic Language Technologies.”

