

Candidate Information

Position:	Research Assistant - Engineer in Multimedia Search
School/Department:	School Office (Elect, Elect Eng & Comp Sci)
Reference:	22/110068
Closing Date:	Monday 15 August 2022
Salary:	£28,756 - £33,309 per annum
Anticipated Interview Date:	Thursday 1 September 2022
Duration:	Available until 31 March 2024

JOB PURPOSE:

To be an active member of the Multimodal Video Search by Examples (MVSE) research project assisting in the planning and delivery of research and development activity in search technology so that the overall research objectives of the project are met.

The postholder will work as part of a three-year, EPSRC funded, multi-partner research project and will work closely with relevant staff at the BBC to understand their current multimedia search technologies as well as their needs for new search technologies. The postholder will work closely with investigators and researchers in all teams of the project consortium and will have the opportunity to develop valuable inter-personal skills through working with a wide variety of people in the project consortium.

This research engineer will (1) contribute to a software demonstrator of novel multimedia search technologies being developed in the project; 2) coordinate software development activities within the whole consortium; and 3) lead on integrating these different software programs into a web/cloud-based demonstrator of the project. In addition, there will be opportunities for experimentation and publishing research in the field of Artificial Intelligence.

MAJOR DUTIES:

1. Review and appreciate existing state of the art technologies for multimedia search (mostly AI technologies).
2. Coordinate and track what partners are doing regarding the development of new multimedia search technologies.
3. Identify and build architectures using opensource technologies to facilitate the integration of relevant software programs that are developed by the different partners.
4. Integrate these software programs into one demonstrator.
5. Design and implement the user interfaces for the demonstrator allowing users to undertake multimedia search.
6. Undertake research experimentation when required.
7. Write and publish research papers, when possible, in collaboration with the project teams.
8. Present regular progress reports to the project teams or to external audiences to disseminate and publicise research findings.
9. Assist the principal investigator to coordinate the project when required.
10. Carry out undergraduate supervision/demonstrating/teaching duties when required.
11. Carry out routine administrative duties when required, e.g. arranging research group meetings, maintaining research group website.
12. Support technical services delivery with Information Services Support Teams.
13. Carry out other duties designated by a line manager, which fall within the remit of the post.

ESSENTIAL CRITERIA:

1. Degree or equivalent in computer science or a closely related discipline.
2. One years' relevant experience to include:
 - Demonstrable programming experience in Python and JavaScript and (MATLAB or C++ or Java).
 - Demonstrable Web development experience including both frontend and backend.
3. Ability to work independently.
4. High level of motivation and organization.

5. Ability to analyse and communicate effectively.
6. Ability to interact with people effectively.
7. Ability to work independently and manage a project whilst taking responsibility for project delivery.
8. Ability to work on own initiative.
9. Experience of contributing to a team environment.

DESIRABLE CRITERIA:

1. Have, or about to obtain a Postgraduate qualification and/or PhD in Computer Science or a closely related discipline.
2. Setting up cloud systems for running software programs (e.g. AWS, Azure).
3. Working with multimedia data.
4. Web development using Flask framework.
5. Practical experience using container technology such as Docker.
6. Linux systems management.
7. Hardware & Software problem solving.
8. Experience in managing software-based projects from conception to implementation.
9. Experience of team leadership.
10. Strong interpersonal and relationship building skills.
11. Excellent communication skills.