Job Description – Backend Developer and Ops Engineer

About the role

The project team runs and develops the world's largest aggregator of research papers called CORE (core.ac.uk), with over 30 million monthly active users and storing over 200 million metadata records and 25 million scientific documents. CORE is currently listed among the 5,000 most used websites globally.

CORE provides free access to millions of research papers as well as a number of information services for researchers, organisations and businesses. These include services enabling text & data mining, recommender systems, content management services for libraries as well as analytical services to support business intelligence for research.

You will work as part of a team of developers and researchers and your role will be as follows:

Key responsibilities

*This is a list of **key** responsibilities and is not meant to be exhaustive. Ideally between five and seven points should be listed. Use terms such as "responsible for", "leading", "managing" to give the applicant information on what the role holder would actually do.*

- Develops, manages, monitors and improves backend services and software processes, especially those for the ingestion and processing of large amounts of data from distributed sources.
- Plans, organises, manages and delivers discrete software components
- Contributes to product and performance improvements and optimisation of existing services.
- Participates actively in team meetings contributing knowledge and expertise to assist in decision making when planning software projects.
- Develops robustness into system infrastructure and both proactively and reactively deals with issues.
- Performs recovery of systems/services when needed.
- Ensures quality of new source code.
- Writes automated tests
    - Unit tests
    - Integration tests
- Engages with collaborators inside and outside the university.

Other responsibilities of the role are:

- To occasionally onboard new team members working in the same role or team as themselves.
- To undertake any other duties which may reasonably be required.

- To be flexible hours in order to meet project deadlines.
- To communicate professionally and clearly with others in order to solve problems.

Skills and experience

Consider what skills and experience the applicant has to have to enable them to do the role. This should ideally be a list of between five and seven criteria.

This is how the interview will differentiate between candidates so should be measurable.

- Education:
    - At least 3-years of experience in backend programming (could be while being at a University)
    - Master's degree (or equivalent experience) in computer science (for an appointment at Grade 7, other candidates will be considered for Grade 6).
- Skills:
    - Essential:
        - Strong Linux fundamentals and scripting.
        - Knowledge of the following tools and technologies:
            - Source Code Management (GIT, GitHub)
            - Logging
        - Experience with full stack software development;
        - Very good knowledge and experience of working with and querying databases.
        - Solid experience of programming in Java and at least one of the following additional programming languages: PHP, Python
        - Willingness to learn new things.
    - Desirable:
        - Experience working with frameworks
        - Experience with processing large amounts of data on a cluster and containarisation, e.g. Spark, Hadoop/MapReduce, Pig, Hive, Kubernetes, Docker
        - Configuration Management (e.g. Puppet, Chef, and Ansible)
        - Continuous Integration, Testing, Monitoring

    - Personal abilities and qualities
        - Attention to detail with an attitude to deliver quality over quantity.
        - Feeling love for software development
        - Ability to take on responsibility and blend in with a team.
        - Ability to quickly demonstrate understanding of the project aims and specific tasks as requested.
        - Willingness to follow an agile development process according to Scrum.
        - Ability to clearly communicate in English both orally and in writing.

Applicants with sufficient skills in most of the essential areas, but less experience in some areas might be considered, but with adequately lower remuneration.