The Council for Scientific and Industrial Research (CSIR) is a leading scientific and technology research organisation that researches, develops, localises and diffuses technologies to accelerate socio-economic prosperity in South Africa. The organisation's work contributes to industrial development and supports a capable state.

Senior Artificial Intelligence (AI) Engineer

About the job:

The CSIR has a vacancy for **Senior Artificial Intelligence Engineer** in the Emerging Digital Technologies for fourth Industrial Revolution (EDT4IR) Research Centre within the Next Generation Enterprises and Institutions Cluster. The incumbent will be responsible to design, develop and implement AI systems architecture and solutions. This position is based in Pretoria.

For more information about the cluster, please visit https://www.csir.co.za/nextgen-enterprises-and-institutions.

Key responsibilities:

- Develop innovative solutions in AI and remain well-versed in new technologies in the evolving AI space;
- Supervise/mentor junior staff in the area(s) of expertise;
- Generate and contribute towards science engineering and technology (SET) activity outputs e.g., reports, guidelines, system requirements, peer-reviewed publications, and technology and software packages;
- Understand and interpret client requirements by contributing to user requirement analysis and/or well-articulated proposals;
- Remain current in field of expertise with respect to new approaches in tools, methods or technologies;
- Participate in external task teams or committees in relevant domains;

Qualifications, skills and experience:

- A Bachelor's degree in computer science/engineering, electrical/electronic engineering, information technology or related field with at least five years' experience in Artificial Intelligence/Machine Learning and software development in Artificial Intelligence Technologies;
- An Honours or Master's degree will be advantageous;
- Experience in the following:
  - Applied machine-learning with regression, classification, etc. models for supervised learning;
  - Natural language processing and understanding, Large language models;
  - Building multimodal models;
  - Unstructured data;
  - Big-data unsupervised learning;
  - Data platform engineering;
  - Demonstrated experience in bringing theoretical machine-learning approaches illustrated in academia research papers to actual implementations, i.e. implemented

and deployed into large-scale production system certain advanced ML and applied ML algorithms;

- o Cloud-based platforms: AWS, IBM Cloud, Azure;
- o Proficiency and experience building AI models with a deep learning framework such as TensorFlow, Keras or Theano;
- o Ability to select hardware to run an ML model with the required latency;
- Exposure to Project Management;
- Understanding of transforming/implementing software/algorithms for use in real-life systems would be advantageous;
- Knowledge of programming in modern object orientated languages, with Open-Source development tools and platforms;
- Ability to demonstrate Object-orientated software engineering skills;
- Strong quantitative skills (mathematics/statistics/computer science);
- Demonstrated ability to supervise/mentor/develop junior staff;
- Demonstrated skills in: analytical thinking, flexibility and adaptability, investigative orientation, planning and organising, problem solving, verbal and written communication, teamwork, self-management (planning, prioritising and time management – includes the ability to work independently), systems level thinking, multi-disciplinary knowledge.
- All international qualifications require an evaluation report / certificate issued by the South African Qualifications Authority (SAQA).

Should you meet the above requirements, please email your CV to jobapplications@csir.co.za with your name and surname, position title and reference number in the subject line, **(e.g. John Smith: Senior Artificial Intelligence Engineer: Reference No: 313068)**

Closing date: 25 June 2024

PLEASE NOTE THAT FEEDBACK WILL BE GIVEN TO SHORTLISTED CANDIDATES ONLY.

For more info, please email us at Recruitmentinfo@csir.co.za. Please **do-not** send your application to this mailbox, it is only for inquiries.