



The Vall d'Hebron Research Institute (VHIR) is a public sector institution that promotes and develops the research, innovation and biosanitary teaching of the Vall d'Hebron University Hospital. Through the excellence of our research, we identify and apply new solutions to the health problems of society and we contribute to spread them around the world.



HR EXCELLENCE IN RESEARCH

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Head of Software Development and System & Data architecture.

Digital Transformation Area

The Digital Transformation Area has the aim of defining, accompanying and reinforcing the digital transformation at VHIR. The Directorate is made up of the SW Development, IT, Quality and Processes and Document Management Units. It is a transversal area that defines and leads the strategy for integrating new digital technologies, adapting and updating their processes and infrastructures in order to gain efficiency and accompany the growth of the Institution.

JOB DESCRIPTION

An exciting opportunity has arisen to join the Digital Transformation Area as the Head of Software Development and System & Data Architecture Unit. We are looking for a highly motivated and experienced individual with expertise in system and data architecture, AI architecture, SW development and strategic planning for data and AI systems. Reporting to the Digital Transformation Director, the successful candidate will lead software development projects, develop strategic data and AI plans, and create a data and systems master plan for an advanced research center.

Education and qualifications:

Required:

- Bachelor's or Master's degree in Computer Science, Data Science, Engineering, or a related field.
- Fluency in Catalan or Spanish and English.

Desired:

- Project management certifications (e.g. Scrum, PMP, PRINCE2) are highly valued.
- Master's degree in Artificial Intelligence or Data Science is highly valued.

Experience and knowledge:

Required:



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- Minimum of 5 years of experience in software development project management.
- Proven experience as a Data Engineer, Data/systems Architect or similar role in big data environments.
- Experience with cloud platforms such as AWS, AmazonS3, Google Cloud, or Azure.
- Familiarity with data visualization tools like Tableau, Power BI, or D3.js.
- Excellent problem-solving skills and attention to detail.
- Strong communication and teamwork abilities.
- Strong knowledge in Agile and DevOps.

Desired:

- Knowledge of data warehousing solutions such as Amazon Redshift, Google BigQuery, or Snowflake.
- Experience with NoSQL databases (MongoDB) and cloud storage solutions.
- Proficiency in using OpenAI API for NLP tasks.
- Strong programming skills in Python, Java, and SQL
- Experience with big data frameworks such as Apache Spark, Hadoop, or Kafka.
- Knowledge of machine learning frameworks like TensorFlow, PyTorch, or scikit-learn.
- Strong knowledge related to web development projects, technical knowledge in .NET, Angular, SQL Server, Javascript and Reporting Tools is a plus.
- Familiarity with ETL tools like Apache NiFi, Talend, or Informatica.

Main responsibilities and duties:

- **Strategic Planning:**
 - Develop and implement the strategic data plan for 2025-2030, including system architecture, data architecture, and AI architecture.
 - Create and execute a data master plan that addresses the unique needs of an advanced research center, focusing on hardware, systems, databases, and AI systems.
- **Software Development Leadership:**
 - Plan, coordinate, and supervise all activities related to software development, from conception to final product delivery.
 - Define and manage the necessary resources, including staff, budget, and time, to ensure that project objectives are met.
 - Establish and maintain clear and effective communication with all interested parties, including the development team and key stakeholders.



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- Proactively identify and manage project risks and issues, implementing effective strategies and solutions to minimize their impact on schedule and budget.
 - Design and oversee the software development process, ensuring compliance with quality standards and industry best practices.
 - Build, lead and motivate a software development team, fostering a collaborative and high-performance work environment.
 - Evaluate team performance and provide constructive feedback to drive continuous improvement and professional growth.
 - Collaborate closely with other departments to ensure smooth and efficient integration.
- **System and Data Architecture:**
 - Design, build, and maintain scalable data pipelines using tools such as Apache Spark, Hadoop, and Kafka.
 - Develop and optimize SQL queries to extract and manipulate large datasets.
 - Implement ETL processes to integrate data from various sources into data warehouses or lakes.
 - Develop and manage data processing workflows using Apache Spark and Hadoop.
 - Manage and optimize NoSQL databases like MongoDB and Cassandra.
 - Utilise cloud storage solutions (e.g., AWS S3, Google Cloud Storage) for scalable data storage.
 - **Machine Learning Integration:**
 - Integrate NLP outputs into machine learning models using frameworks such as TensorFlow, PyTorch, and scikit-learn.
 - Utilise OpenAI's API to perform advanced NLP tasks such as sentiment analysis, text summarization, and entity recognition.
 - Manage team and advise data scientists to write efficient and maintainable code in Python and/or Java.
 - Collaborate with data scientists to refine models and improve performance.
 - Create insightful visualizations using tools like Tableau, Power BI, and D3.js.
 - Develop custom dashboards to present analytical findings to stakeholders.

Labour conditions:

- Full-time position: 40h/week.
- Starting date: As soon as possible
- Gross annual salary: Remuneration will depend on experience and skills. Salary ranges are consistent with our Collective Agreement pay scale.



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- Contract: Permanent.

What can we offer?

- Incorporation to Vall d'Hebron Research Institute (VHIR), a public sector institution that promotes and develops the biomedical research, innovation and teaching at Vall d'Hebron University Hospital (HUVH), the biggest hospital of Barcelona and the largest of Catalan Institute of Health (ICS).
- A scientific environment of excellence, highly dynamic, where high-end biomedical projects are continuously developed.
- Continuous learning and a wide range of responsibilities within a stimulating work environment.
- Individual training opportunities.
- Flexible working hours.
- 23 days of holidays + 9 personal days.
- Flexible Remuneration Program (including dining checks, health insurance, transportation and more).
- Corporate Benefits: platform through which you can obtain significant discounts on travel, culture, technology, gastronomy, sports... among many others.
- Healthy Offering: choose from a variety of wellbeing focused activities to be the healthiest you.

How to apply:

Applicants should submit a full Curriculum Vitae and a motivation letter with the reference "Head of Software Development and Systems & Data architecture" to the following email addresses:and seleccio@vhir.org

Deadline to apply: 30/08/2024

The Fundació Hospital Universitari Vall d'Hebron-Institut de Recerca - "VHIR"-, with NIF G-60594009, address in Barcelona -08035- Passeig Vall d'Hebron 119-129, Edifici Mediterrània, 2a planta and telephone (34) 934 89 30 00 is the data controller for the processing of your personal data. The data will be processed exclusively for the purpose of managing your participation in the selection process, as well as, if necessary, managing your participation in other selection processes.

Unless you give your informed consent to keep your personal data for future selection processes, in the event that the selection process is completed and you are not the person selected, your personal data will be deleted and blocked in order to be able to respond to any possible liabilities that may arise.

The legal basis of the processing is the execution of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract.



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The recipient of the data will be the VHIR's Professional Development personnel and no transfer of personal data is foreseen, except for the fulfilment of legal obligations applicable to the data controller. International data transfers are not foreseen. No automated decisions will be taken, including profiling. In general, personal data will not be communicated to third parties, except for legal obligations in accordance with Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (GDPR) to persons who are entitled to request them. You have the rights of access, rectification, deletion, portability, limitation and opposition that can be exercised at any time through the email dpd@ticsalutsocial.cat or lopd@vhir.org. In compliance with Regulation (EU) 2016/679, the VHIR has appointed a data protection officer, whose contact details are dpd@ticsalutsocial.cat. You can also lodge a complaint with the competent Data Protection Authority by contacting www.apdcat.cat or www.aepd.es.