We are looking to support our rapidly growing team as soon as possible:

Scientific Data Platform Engineer (f/m/x)

Biomedizinische Informatik

TV-L: 38,5 h/week (100%)

initially limited for 2 years with the possibility of extension according to WissZeitVG within the framework of a third-party funded project

Your salary will be based on TV-L EG 13

Your tasks

- Analysis of the data ecosystem: assessment of data systems, interfaces and data quality; evaluation of security/privacy and interoperability (data-level to user-level)
- Data & interface architecture: Collaboration on the blueprint for the clinical Nephrology data ecosystem (data flows, API specifications, data models, interoperability standards)
- Development and integration of novel AI solutions in the data integration pipelines, designing test and production environments, and Software deployment
- Pilot operation & platform reliability: Operation, testing, monitoring and fine-tuning of data processing modules/pipelines, including retraining/optimization of AI components, log/performance analyses, compliance with all security/privacy requirements, completion with a security check and backup and recovery
- DevOps/automation: CI/CD for data pipelines and services, observability (metrics/tracing), incident handling, service request management and continuous Docker hardening
- Collaboration with clinical teams at UKK and associated stakeholders such as external partners developing products
- Clinical data integration & interoperability:

Your future with us

- As part of the Data Integration Center, you will shape the secure, interoperable data foundation on which the PodoSign is built - thereby directly contributing to the digital transformation of medicine.
- We offer an excellent technical infrastructure (medical data integration center) and clinical collaborations to work with real-world healthcare data
- We promote your professional career development, with the opportunity to take part in national as well as European-wide academic, research and industry consortia
- We guide you to acquire your own research projects and lead a team of junior developers and researchers
- Our institute promotes diversity and offers a family-friendly and modern working environment
- We offer flexible office hours

Your future in detail

This position is embedded in the joint research project SFB TRR422 and contributes to implementing the DFG funding guideline *“Podocyte Signalling Networks: From Basic Concepts to Disease Understanding”* - with a

Operation of robust data flows between hospital information systems, review and fine-tuning of HL7®/FHIR® -based pipelines, pseudonymization and consent management
- Science & transfer: Contribution to documentation, scientific publications and lessons learned from the pilot project
- Networking within the national Medical Informatics Initiative Network

Your profile

- Education: Master's degree (or equivalent) in Biomedical Informatics, Data Science, Computer Science, or a related field
- Technical skills:
  - Hands-on experience in data engineering (ETL/ELT, APIs, microservices), interoperability (HL7®/FHIR®), data quality, and data modeling
  - Security & privacy by design in clinical IT (e.g., IAM/role-based access, logging/auditing, pseudonymization, consent workflows)
  - Solid Python (and R) skills; experience with SQL/NoSQL; container/orchestration know-how is a plus
  - Hands-on experience on Deployment and Operations
- Research skills: Analytical mindset, familiarity with FAIR principles, motivation to publish and present results
- Communication skills: Ability to collaborate across disciplines with clinicians, visualize and present data to researchers and IT experts from the industry
- Nice-to-haves: Experience with MLOps/model serving, observability stacks, cloud/hybrid infrastructure (e.g., Azure), frontend prototyping/dashboards
- Working style: Structured, quality- and security-oriented; motivated to collaborate closely with clinical care, research, and industry. Documentation of architecture and operations processes including building a knowledge base.

Our offer

- Real clinical impact: You bring modern data and AI solutions into real workflows - validated at two leading MII-Centers (University Hospital of Cologne, Hamburg and Münster)
- DIZ tooling & real-world data access: Work with established DIZ services (HL7/FHIR, pipelines, pseudonymization/consent) in a real care setting
- A varied role: From ecosystem analysis and architecture to secure pilot operations - with clear work packages and measurable outcomes
- Team & development: Interdisciplinary environment

focus on data-driven value creation and cooperative patient registries in healthcare. Within the consortium, the Data Integration Centre at the University Hospital Cologne (MeDIC-UKK) is responsible, in particular, for secure data exchange, data processing, data visualisation, and the development of innovative solutions for a stable integration infrastructure across clinical systems. The role encompasses a wide range of tasks - from analysing the clinical data ecosystem, developing an interface and reference architecture, piloting and securely operating the solution, to working with the Institute for Biomedical Informatics at the University of Cologne (BI-K), Department of Internal Medicine of the University Hospital of Cologne, and other stakeholders.

with MeDIC-UKK, BI-K, UKK, UKE, UKM and other clinical partners; opportunities for publications and conference contributions within the project context
- We offer an excellent technical infrastructure (medical data integration center) and clinical collaborations to work with real-world healthcare data
- We promote your professional career development, with the opportunity to take part in national as well as European-wide academic, research and industry consortia
- Our institute promotes diversity and offers a family-friendly and modern working environment, including flexible home-office hours

Applications from female candidates are expressly welcome and will be given priority in the event of equal suitability, competence and professional performance. People with disabilities are welcome to apply and will be treated preferentially in the event of equal suitability and qualification. The position is suitable for staffing with part-time employees.

Contact

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Geschäftsbereich Personal
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Uniklinik Köln Karriere

Application deadline: 2 August 2026

Job-ID: eihpdit5

apply now

We look forward to receiving your application and getting to know you!