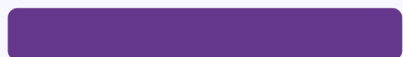




PFE BOOK

EDITION 2025-2026





Tanit.ai

Tanit AI is an innovative fertility assistant platform dedicated to educating and empowering individuals about fertility.

This comprehensive PFE book outlines our internship opportunities at Tanit AI, detailing the roles, responsibilities and growth potential within our organization.

Knowledge Graph Reasoning & Deep Learning

What You'll Do

- Design and implement graph neural networks for biomedical knowledge representation
- Develop advanced reasoning algorithms for knowledge graph traversal and inference
- Integrate deep learning models with symbolic knowledge representations

Key Deliverables

- A constructed or extended fertility-focused medical knowledge graph implemented in Neo4j
- Multi-hop reasoning components for selected clinical tasks
- A GraphRAG pipeline integrating graph queries and vector retrieval with an LLM to answer medical questions

Required Skills



[APPLY FOR THIS POSITION](#)

Machine Learning & Data Science

What You'll Do

- Perform data preprocessing, exploratory data analysis and structuring of complex medical datasets
- Design, develop, evaluate and deploy AI models and backend solutions using Python libraries and FastAPI
- Develop and implement Explainable AI (XAI) techniques to ensure transparency and interpretability in ML models

Key Deliverables

- Construction of a structured dataset from unstructured medical records
- Training and validation of ML models for key reproductive medicine tasks
- Comprehensive documentation detailing data analysis, model architecture, training process and evaluation results

Required Skills



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Generative AI

What You'll Do

- Develop multi-agent systems using LangGraph, CrewAI or custom orchestrators
- Implement GraphRAG pipelines integrating Neo4j and vector stores for retrieval and reasoning
- Build custom tools and MCP (Model Context Protocol) integrations to extend agent capabilities.

Key Deliverables

- Operational Agentic AI system with modular tools and memory
- Working GraphRAG pipeline integrated into Tanit AI
- Benchmarks for reasoning accuracy and latency
- Documentation and final demo

Required Skills



[APPLY FOR THIS POSITION](#)

Multimodal data engineering

What You'll Do

- Design and implement OCR & layout analysis pipelines for fertility-related medical documents
- Use vision-language models (VLMs) to understand document structure
- Extract clinical entities and relations & normalize them using biomedical ontologies and map them to the KG

Key Deliverables

- Production-ready ETL pipeline with monitoring and error handling
- Integration module that combines OCR + VLM to extract key fields and relationships
- Mappings and scripts to normalize and inject extracted data into the medical knowledge graph

Required Skills



Hugging Face



[**APPLY FOR THIS POSITION**](#)

Biomedical Knowledge Graph Engineering

What You'll Do

- Ingest and harmonize biomedical ontologies and terminologies using open APIs and datasets
- Model medical concepts and relationships using Neo4j or equivalent graph databases
- Develop robust ETL pipelines to fetch, transform and update ontology data at scale

Key Deliverables

- A scalable ontology ingestion pipeline capable of integrating multiple biomedical vocabularies via APIs
- A fully operational medical knowledge graph implemented in a graph database
- A vector-enhanced knowledge base enabling hybrid graph and embedding-based retrieval

Required Skills



[**APPLY FOR THIS POSITION**](#)

Multimodal Generative AI

What You'll Do

- Develop vision-language models for medical image analysis and interpretation
- Integrate large language models with voice interfaces for patient interactions
- Build multimodal AI applications that seamlessly combine text, image and audio

Key Deliverables

- Multimodal AI models capable of processing text, images and voice inputs
- Integrated application demonstrating cross-modal understanding
- Voice interface system with natural language understanding capabilities

Required Skills



Hugging Face



FastAPI



OpenAI

[APPLY FOR THIS POSITION](#)

Software Quality Assurance

What You'll Do

- Design and execute manual and automated test plans for web, backend and AI-based components
- Implement and maintain CI/CD testing pipelines
- Perform functional, integration, regression and performance testing

Key Deliverables

- Automated testing framework with CI/CD integration
- Comprehensive test suite covering functional and non-functional requirements
- AI model validation framework with performance monitoring dashboards

Required Skills



[APPLY FOR THIS POSITION](#)

Full-Stack - React/JS

What You'll Do

- Develop and maintain responsive and accessible web applications using React
- Build Springboot RESTful APIs and backend services to support frontend functionality
- Integrate frontend applications with AI services and microservices

Key Deliverables

- A fully functional React & Spring Boot web platform integrated with Tanit AI services
- Clear technical documentation and deployment guide
- Final demo showing end-to-end interactions

Required Skills



[APPLY FOR THIS POSITION](#)

How to Apply

Fill the form

A 1-minute video
introducing yourself
and explaining why
you're the perfect
match for the role

Your up-to-date CV

