Dr. Zhangshu Joshua Jiang, MBChB

Clinical Fellow | Medical AI Researcher | Healthcare Data Scientist

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GMC Registration: 8006097

Professional Summary

Clinically trained physician with advanced expertise in artificial intelligence and healthcare data science. Experienced foundation doctor with intensive care specialty training, currently working as Clinical Data Scientist developing AI solutions for healthcare applications. Proven track record in clinical excellence, digital health innovation, and academic leadership. Seeking clinical fellowship opportunities that combine patient care with cutting-edge AI research and implementation.

Education & Qualifications

MBChB, Medicine – University of Sheffield, 2023
Advanced Life Support (ALS) – Resuscitation Council UK, 2023
GMC Full Registration with License to Practice – Valid through June 2029

Clinical Experience

Foundation Doctor

Lancashire Teaching Hospitals NHS Foundation Trust | August 2023 – August 2025

Intensive Care Unit (ICU) Rotation:

- Managed complex patients in 32-bed ICU including post-operative, trauma, and medical emergencies

- Performed arterial line insertions (47 independent, 5 supervised) and ultrasound-guided cannulation (87 independent, 10 supervised)

- Assisted with central line insertions (12 independent, 5 supervised) and ventilator management

- Applied evidence-based protocols for patient deterioration recognition and escalation

- Led multidisciplinary team coordination and family communication in critical care settings

General Medicine & Surgery Rotations:

- **Gastroenterology:** Managed patients with chronic liver disease, GI bleeds, and complex comorbidities

- **ENT Surgery:** Assisted in theatre procedures and managed post-operative care including airway emergencies

- **Upper GI Surgery:** Provided perioperative care for patients with oesophageal and pancreatic malignancies
- **General Practice:** Delivered primary care services and chronic disease management

Digital Health Innovation Leadership:

- Spearheaded transition from paper-based to cloud-based clinical handover systems using SharePoint Online
- Improved handover completeness from 70% to 95% and reduced preparation time by 20%
- Standardized ISBAR-based documentation across multiple departments
- Implemented digital clinical tools improving workflow efficiency and reducing documentation errors

Research & Data Science Experience

Clinical Data Scientist & Research Fellow

Lancashire and South Cumbria Secure Data Environment | November 2024 – Present
Reporting to: Prof. Vishnu Chandrabalan, Head of Data Science and AI

AI Model Development:

- Developed and deployed agentic Large Language Model (LLM) systems converting natural language queries to SQL
- Achieved reduction in data extraction times while improving accessibility for clinical staff
- Designed machine learning models for multimodal patient data analysis with measurable diagnostic accuracy improvements

Healthcare Data Infrastructure:

- Led integration of NLP pipelines into OMOP Common Data Model for enhanced healthcare interoperability
- Contributed to development of 62M+ node biomedical knowledge graph supporting AI-driven clinical reasoning
- Deployed and maintained Azure-based AI solutions for clinical decision support and automated report generation

Clinical Applications:

- Bridged technical data science expertise with practical clinical applications within NHS framework
- Ensured AI implementations deliver measurable improvements to healthcare delivery and patient outcomes

Technical Competencies

Programming & Data Science:

- **Languages:** Python, R, SQL, Java

- **AI/ML Frameworks:** TensorFlow, PyTorch, scikit-learn, Hugging Face, OpenAI APIs

- **Healthcare Standards:** FHIR, OMOP, SNOMED-CT, ICD-10/11, LOINC

- **Cloud Platforms:** Azure, AWS, GCP with healthcare compliance

Clinical Informatics:

- Electronic Health Record (EHR) data structuring and analysis

- Clinical decision support system development

- Natural Language Processing for medical records

- Clinical workflow optimization and digital health solutions

Academic & Teaching

National Medical Education Leadership

Finals 2 Foundation Series | October 2024 – February 2025

- Organized and led 14-week national medical finals revision series on MedAll platform

- Coordinated multidisciplinary teaching team of FY1-FY3 doctors

- Delivered twice-weekly live lectures reaching 200+ medical students across UK universities

- Managed curriculum design, speaker coordination, and technical platform logistics

- Successfully built educational community with interactive Q&As and on-demand resources

Teaching Responsibilities:

- Delivered structured tutorials to medical students and foundation doctors

- Contributed to foundation doctor teaching programmes

- Mentored junior colleagues in clinical skills and career development

Quality Improvement & Leadership

Digital Transformation Projects

SharePoint Clinical Handover System Implementation

- Led trust-wide rollout of cloud-based handover documentation system

- Designed ISBAR-based template with mandatory fields improving patient safety

- Conducted pilot testing, gathered feedback, and iteratively improved system design

- Provided training and support to clinical teams across multiple departments

- Achieved measurable improvements in care continuity and reduced clinical errors

Clinical Audit & Innovation

- Conducted quality improvement projects in surgical settings

- Implemented new clinical protocols improving patient care pathways

- Presented outcomes at trust-wide quality improvement meetings

Core Competencies

Clinical Skills:

- Advanced life support and critical care management

- Multidisciplinary team leadership and communication

- Clinical decision-making under pressure

- Evidence-based medicine application

Research & Innovation:

- AI/ML model development for healthcare applications

- Clinical data analysis and interpretation

- Health technology assessment and implementation

- Academic writing and presentation skills

Leadership & Management:

- Project management and team coordination

- Change management and digital transformation

- Educational programme development and delivery

- Stakeholder engagement and communication