

Nooruldeen Taffar

Physician (MBChB) | Health Data Scientist | Health Informatics

Baghdad, Iraq - open to relocation with employer sponsorship

nooriskander94@gmail.com

github.com/NooruldeenTaffar

linkedin.com/in/nooruldeen-taffar-5bb34b217

nooruldeentaffar.com

RESEARCH DIRECTION

Multimodal AI for automated cardiovascular diagnosis - fusing 12-lead ECG image data with EHR records and demographics into a diagnostic model that runs in parallel with conventional clinical workflow, rather than in place of it. Currently building a PROBAST+AI instrument for systematic appraisal of clinical prediction and medical foundation models. Seeking a PhD in medical informatics from approximately 2027.

EDUCATION

PGDip Data Science for Health & Social Care

2024 - ongoing

University of Edinburgh

8 of 10 modules complete: big data analytics, databases, applied software development, statistics, NLP in health and social care, research foundations.

MSc Health Informatics

Sep 2022 - Feb 2024

Swansea University Medical School - 180 credits / 90 ECTS, awarded 11 March 2024

Dissertation: Ethical Challenges Facing the Implementation of Gamification in Healthcare - a PRISMA systematic review with thematic analysis, yielding a seven-theme ethical framework (unpublished).

MBChB (Bachelor of Medicine, Bachelor of Surgery)

Sep 2012 - Jun 2018

Al-Muthanna University, College of Medicine, Iraq

Six-year primary medical degree, MD-equivalent. Rotations across internal medicine, emergency, surgery, paediatrics, obstetrics and psychiatry.

RESEARCH AND SOFTWARE

GenECG-Diagnostic

2026, in progress

PyTorch - YOLOv8/YOLO11 - Vision Transformer - SNOMED-CT

- Stage 1: a YOLO detector locates and crops the twelve lead panels from a raw 3x4 grid ECG image, trained on a custom heuristically-labelled dataset.
- Stage 2: a google/vit-base-patch16-224 Vision Transformer, fine-tuned with BCEWithLogitsLoss, predicts multiple SNOMED-CT codes per ECG.
- Built end to end - data pipeline, augmentation, YOLO label generation, training for both stages, and full image-to-diagnosis inference. Evaluated by mAP and per-label F1/AUC; formal reporting in progress.

PROBAST+AI scoring tool

in progress

A structured instrument for appraising risk of bias and applicability in clinical prediction models and medical foundation models.

SELECTED APPLIED ANALYSES

- 30-day readmission prediction on ~100,000 inpatient encounters across 130 hospitals - Apache Spark / sparklyr, gradient-boosted trees. AUC-ROC 0.666; encounter-level split documented openly as a leakage risk, with a patient-level split as the next iteration.
- Nine years of NHS Scotland prescribing data in SQL/MariaDB - multi-year CTEs, window functions, ERD design. Average cost per item rose from ~GBP 4 (2015) to GBP 7.15 (2023).
- mHealth medication adherence, n = 8,954 - assumption-checked ANOVA, Wilcoxon rank-sum and linear regression in R; strong association between app-usage frequency and adherence.
- OECD teleconsultation policy analysis for a Portuguese health-policy audience, and an interactive Shiny-for-Python dashboard running fully client-side via Pyodide.

CLINICAL EXPERIENCE

Physician - Emergency & Outpatient Care

2019 - 2021

Iraq

- Chief Doctor, Suwayrah General Hospital (Iraqi Ministry of Health), Apr 2019 - Jun 2020. Elected by colleagues. Coordinated physicians and nursing staff across rotations, allocated resources under constraint, and held accountability for departmental clinical standards. Helped reopen the outpatient wards and reduced junior-doctor workload by roughly 10%.
- Emergency physician, Red Crescent Hospital, Baghdad. Initiated re-establishment of the emergency unit, then audited door-to-referral time for MI patients - cutting cardiac catheterisation lab referral from 60 minutes to 15, a 75% reduction - by synchronising emergency workflow with the newly opened cath lab.
- Internal medicine physician, Al-Amal Clinics, Jul 2020 - Dec 2021.

Medical Writing Intern

Apr - Jul 2024

Klarity Health - remote

Clinically accurate, patient-facing health content through iterative editorial review with qualified medical reviewers; translating clinical evidence into plain English.

TEACHING AND SERVICE

- Student representative, PGDip Data Science for Health & Social Care, University of Edinburgh - represented the cohort to the programme lead and pushed to ease Royal Statistical Society registration for graduates.
- Clinical supervision as Chief Doctor: coordinating and supporting junior doctors and nursing staff across rotations.
- Comfortable teaching in English or Arabic.

TECHNICAL SKILLS

Languages	Python (pandas, scikit-learn, PyTorch), R (tidyverse, broom, car), SQL (MariaDB / RMariaDB)
Big data & ML	Apache Spark / sparklyr, Spark MLlib, gradient-boosted trees, EHR pipelines, NLP, computer vision (YOLOv8/YOLO11, Vision Transformers), multi-label classification
Visualisation	Matplotlib, Seaborn, Plotly, ggplot2, Shiny for Python (Pyodide/WebAssembly), Tableau
Data engineering	Relational schema / ERD design, CTEs, window functions, JSON handling and repair, reproducible R Markdown workflows
Clinical standards	ICD-10, SNOMED-CT (hands-on)
Methods	PROBAST+AI appraisal, PRISMA systematic review, SPIDER search strategy, CASP appraisal, applied biostatistics, user-centred and Spiral-model design, Git/GitHub
Governance	UK GDPR, Data Protection Act 2018, 5 Safes framework, trusted research environment / Safe Haven working, FAIR principles, de-identification

LANGUAGES, MEMBERSHIPS AND ELIGIBILITY

Languages	Arabic (native). English fluent - IELTS Academic, 12 January 2026: overall 8.0 (L 8.5, R 7.0, W 7.5, S 8.0), CEFR C1. Both postgraduate degrees taken at UK universities.
Memberships	British Computer Society (Student Member); Royal Statistical Society (Student Member); Iraqi Medical Association (full professional member).
Eligibility	Authorised to work in Iraq. Requires employer sponsorship elsewhere and is open to relocation. Available immediately.
Referees	Two academic referees, both confirmed - a Lecturer in Data Science and Programme Director at the Usher Institute, University of Edinburgh, and a Senior Lecturer in Health Data Science at Swansea University. Contact details on request.