

# CHANG HO YOON



## CURRENT PROJECTS

### AI & Digital Health consulting at [AGMI](#)

- Developing AI deployment strategy & operational optimisation models for Biopharma, Biotech and Healthcare institutions (US, APAC, LATAM)
- Collaborating with C-suite and directors for cross-functional development of AI tools, e.g., AI agents for competitive market analysis and due diligence
- Data tools: Snowflake, AWS Cloud & SageMaker
- Ontologies: ICD-10, SNOMED CT, LOINC, CPT codes

### Chief Medical Officer at [NEX Health Intelligence](#) since 2022

Startup using a multimodal AI-based infection prevention platform

- Won British Infection Association grant to validate AI models at Guy's & St. Thomas' Hospital, London
- Navigating regulation for digital health tools and AI in UK, Europe, USA
- Epic & Cerner integration

### AI & ML research, resource-abundant settings

Leading 4 international collaborations:

- Oxford, Auckland - analysis of clinic data using Large Language Models
- Oxford, Oslo, Karolinska - validation of machine learning-derived sepsis phenotypes
- Oxford, MIT - improvement of stroke risk calculators using causal inference & machine learning
- Oxford, Charité Berlin - multiomic differentiation of viral & bacterial pneumonias

### AI & ML research, resource-constrained settings

Leading the AI & data analytics arm

- Won 2nd prize (£600,000) [Trinity-MIT Challenge on Antimicrobial Resistance](#)
- Collaborating with Public Health India, LSHTM, Cambridge, & iKure to track and improve antimicrobial use in under-resourced communities in India

### AI in law

- Co-creating an educational resource on AI implementation in legal practice with barrister [Paul Bonner Hughes](#)



[View & download this CV online](#)

## CONTACT

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 [changhoyoon](#)  
 [chy055](#)

## LANGUAGE SKILLS

R	
Python	
SQL	
English	
Korean	
French - certified C2 'mastery'	
Spanish - certified C2 'mastery'	



## EDUCATION

2023  
|  
2020

### DPhil (PhD), Statistics & Biomedical Sciences

University of Oxford  
Wellcome Trust & [Turing Institute](#) Scholar

📍 Oxford, UK

- Thesis: "Application of statistical & AI methods in electronic health records to estimate the impact of antibiotic resistance"
- R, PyTorch, TensorFlow, SQL
- Developed neural network-based survival modelling
- Applied causal inference & deep learning models incl. natural language processing
- Annual travel grants to talk at ML for Healthcare, European Society of Clinical Microbiology & Infectious Diseases

2020  
|  
2019

### MBI, Master's of Bioinformatics

Harvard University | MIT  
[Fulbright Scholar](#)

📍 Boston, USA

2012  
|  
2006

### MB BChir (MD), Medicine & Surgery

University of Cambridge  
University Academic & Music Scholar

📍 Cambridge, UK

- MB BChir (MD) (Distinction, GPA 4.0)
- BA in Natural Sciences (1st class, GPA 4.0)



## AI & TECH EXPERIENCE

2022

### AI R&D Intern

[QuantumBlack \(McKinsey & Co.\)](#)

📍 London, UK

- Built internal tool (Python, PyTorch) for semi-automatic, interpretable, causal AI
- Collaborated with C-suite of US client, internal data engineers and scientists

2021  
|  
2020

### Orion Healthcare

[Orion Health](#)

📍 Auckland, NZ

- Collaborated with C-suite to write internal white paper on ML & AI opportunities using electronic health data

2018  
|  
2016

### Co-Principal Programmer & Investigator

[SCRIPT antibiotic app](#)

📍 Auckland, NZ

- Spearheaded the development, design & research of a smartphone app displaying antibiotic guidelines to hospital doctors
- Won \$250,000 in national research grants
- Continues to be downloaded & used 800,000+ times/year



## CLINICAL EXPERIENCE

Current  
|  
2025

### Senior Resident

Royal College of Physicians of Ireland

📍 Dublin, Ireland

2025  
|  
2024

### Clinical Fellow

Oxford University Hospitals NHS Trust

📍 Oxford, UK

• Infectious Diseases, Haematology, Oncology

2021  
|  
2014

### Medical Resident

Imperial College & Auckland Hospitals

📍 London | Auckland

• Oncology, Haematology, General Internal Medicine

• Prizes for Clinical, Teaching & Research Excellence



## SELECTED PUBLICATIONS

[Orcid ID](#) for all affiliations & articles

2025

### Transformers and large language models are efficient feature extractors for electronic health record studies

Communications Medicine (Nature) [link](#), joint 1st author

2024

### Distinct patterns of vital sign and inflammatory marker responses in adults with suspected bloodstream infection

Journal of Infection [link](#)

2023

### Long-Term Impact of a Smartphone App on Prescriber Adherence to Antibiotic Guidelines for Adult Patients With Community-Acquired Pneumonia: Interrupted Time-Series Study

Journal of Medical Internet Research [link](#), 1st author

2022

### A convolutional neural network highlights mutations relevant to antimicrobial resistance in Mycobacterium tuberculosis

Nature Communications [link](#), joint 1st author

2022

### Mortality risks associated with empirical antibiotic activity in Escherichia coli bacteraemia: an analysis of electronic health records

Journal of Antimicrobial Chemotherapy [link](#), 1st author

2021

### Machine learning in medicine: should the pursuit for enhanced interpretability be abandoned?

Journal of Medical Ethics (BMJ) [link](#), 1st author



## SELECTED INVITED TALKS

2024

### Generative AI in clinical practice

European Congress of Clinical Microbiology & Infectious Diseases

2022

### Harnessing AI for genomic insights in drug-resistant TB

[WHO](#)

2020

### Musings on AI

[IM Reasoning](#) podcast

2017

### Complex medical case

[IM Reasoning](#) podcast



## TEACHING EXPERIENCE

Current  
|  
2018

### Co-creator of medical MCQs website

[MedCQs](#)

2025

### Machine learning & AI with biomedical data

University of Zürich & ETH Zürich

📍 Zürich, Switzerland

- Invited faculty, lecture & practical sessions on ML & AI tools applied to multimodal biomedical data

2022

### Machine learning & AI with biomedical data

Oxford's Big Data Institute

📍 Oxford, UK

- Lecture & interactive seminar for Oxford PhD students using Google Colab.

2021  
|  
2010

### Tutor of natural sciences & medicine

Medical simulations, clinical, pre-clinical

📍 Multiple (see details)

- Created and taught pathology & bedside clinical simulation at Cambridge University, Imperial College, Auckland University
- range of feedback scores: 4.5-4.9/5.0



## LEADERSHIP

2023

### Environmental Officer

St. John's College, University of Oxford

2023  
|  
2018

### Medical Residents' Training Committee

Royal Australasian College of Physicians (NZ)

2020

### MIT Grand Hack

Led teams to win Hacking Medicine & special industry prizes



## OTHER INTERESTS

### Arts

Former professional, casual violinist for Auckland Philharmonia Orchestra  
Former lead violin understudy in Les Misérables - West End, London  
ABRSM Performance Diplomas: Distinctions in violin & piano  
Highland bagpiper  
Historical fiction

### Sport

Triathlon incl. Ironman, marathon, trail ultramarathon, open-water swimming