Yujie Dai

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Education

Population Health Data Science PhD
Funded by EPSRC

Sept 2022 – Present
Digital Health and Care CDT, School of Engineering Mathematics and Technology, University of Bristol (UOB), Bristol, England, UK
Supervisor: Prof Andrew Dowsey, Prof Raul Santos-Rodriguez, Dr Brian Sullivan
Project: Explainable AI in Infectious Disease Diagnosis and Antibiotic Resistance Prediction Using a 'Systemwide' EHR Dataset

Artificial Intelligence
Master of Science
with **Distinction**

Sept 2021 – Sept 2022
School of Computer Science
University of St Andrews, St Andrews, Scotland, UK
Supervisor: Prof Simon Dobson
Dissertation: Investigating the relationship between network properties and the spread of disease
My dissertation focuses on finding how the size and connectivity of networks affect the transmission process of diseases
Key modules: Artificial Intelligence Practice, Object-Oriented Modelling, Software Engineering, Machine Learning, etc.

Software Engineering
Bachelor of Science

Sept 2016 – Jul 2020
School of Computer Science and Technology
Beijing Institute of Technology (BIT), Beijing, China
GPA: 84/100 | **IELTS**: 7.5
I got my Undergraduate degree in Computer Science at BIT and graduated as one of the top students in the School with GPA 84 out of 100. During my study at BIT, I've been awarded multiple prizes for academic excellence.
University Scholarships: 2nd Runner-up prizes for academic years 2016 – 2017, 2017 – 2018, 2018 – 2019, respectively.

Publications

Dai, Y; Sullivan, B; Montout, A; Dillon, A; Waller, C; Acs, P; Denholm, R; Williams, P; Hay, A.D.; and Dowsey, A. 2024. Explainable AI for Classifying UTI Risk Groups Using a Real-World Linked EHR and Pathology Lab Dataset. arXiv: 2411.17645. *Access: https://arxiv.org/pdf/2411.17645* (Accepted in the 2025 AAAI Health Intelligence Workshop. Cuerrently processing to publish)

Academic Activities

05 Mar 2025	Oral Speaker, **The 39th Annual AAAI Conference on AI Health Intelligence Workshop, Philadelphia, PA, USA** *Explainable AI for Classifying UTI Risk Groups Using a Real-World Linked EHR and Pathology Lab Dataset*
27 Feb 2024	Poster Presenter, **Combatting CDI Conference 2024, Cardiff, UK** *Characterising CDI in the Southwest of England with the BNSSG Systemwide Dataset*
15 Nov 2023	Poster Presenter, **UK Health Security Agency 2023, Leeds, UK** *UTI & CDI Detection and Analysis in the Local BNSSG Area*
Jan - Feb 2025	Turing Data Study Groups (DSG), **The Alan Turing Institute**
Dec 2024 – Present	Clinical AI Interest Group, **The Alan Turing Institute**
08-12 Jan 2024	**2024 Northern Lights Deep Learning Winter School, Tromoso, Norway**
3-5 Jul 2024	Volunteer, **52nd Society for Academic Primary Care Annual Scientific Meeting, Bristol, UK**
Aug 2019 – Nov 2019	Team member, **Gold Award, International Genetically Engineered Machine Competition (iGEM) 2019**

Working Experiences

Aug 2024 – Present	**Jean Golding Institute, UK** **Research Data Scientist (Part-time)** Support various research projects with data analysis, model training, experimental designs, and other technical support.
Jul 2020 – Aug 2021	**Graph Data and Blockchain Laboratory, BIT** **Research Assistant** Supervisor: Prof Rong-Hua Li Participated in the static test platform project that integrated multiple software testing tools in a comprehensive platform.
Aug 2019 – Aug 2020	**Bentley Systems (Beijing) Co., Ltd** **Project Management Intern (Part-time)** Participated in the Service Partner Program and User Advancement Program and took charge of data analysis, information statistics and related work of technical certification.
Sep 2020 – June 2021	**Beijing Quchuangyi Technology Development Co.,Ltd** **Programming Tutor (Part-time)** Teach programming for children aged 6-16, including Scratch, Python, and C++

Teaching Experiences

2023 - Present **School of Engineering Mathematics & Technology, UOB**
SEMTM0022 - Programming and Analytics for Digital Health
COMSM0090 - Advance Financial Technology
EMATM0061 - Statistical Computing and Empirical Methods

Project Experiences

Oct 2019 – Jan 2020 **Automatic Game-playing Based on Reinforcement Learning**

- Developed a maze game by utilizing Q-Learning algorithm

Jul 2019 – Oct 2019 **Search Engine Evaluation System**

- Conducted data pre-processing and feature extraction of NLP.

Mar 2019 – Jul 2019 **Postgraduate Enrollment Prediction System Based on Hadoop**

- Adopted user CF algorithm to build model based on MapReduce

Oct 2018 – Jan 2019 **Emotional Analysis and Prediction of User Behavior Based on Movie Review Text**

- Employed Python statement to conduct preprocessing, model training and model evaluation of MovieLens dataset.

Jul 2018 – Sept 2018 **Big Data on Health Care-Adolescents' Eyesight Protection System**

- Applied WeChat web developer tool to make interfaces of a mini program