Xuelong An

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- ▶ Class Notes
- 💬 Discord
- 🌐 https://awxlong.github.io

Education

2023 – 2024 📑 **University College London - Master of Science with Distinction** in Artificial Intelligence for Biomedicine and Healthcare.
• Thesis: *Unveiling Colon Cancer Therapy Resistance through Multiple-Instance Learning in Histopathology Images*, supervised by Dr. Petru Manescu, Dr. Pan Shi and Dr. Maria Secrier (Grade: 80%)
• AI for Biomedicine and Healthcare: *Concept-bottleneck modelling for interpretable melanoma classification*.
• Applied AI: *Schizophrenia classification from brain anatomical data through Bayesian optimization*.
• Advanced Computational Biology: *Vectorized MCMC parameter estimation for the multispecies coalescent model for two species*
• Notable courses: Probabilistic modelling, Bayesian deep learning

2019 – 2023 📑 **University of Edinburgh - Master of Arts with Honors with 2:1 Class Division** in Cognitive Science.
• Thesis: *Charting the Landscape of Neuro-Symbolic Reasoners*, with Dr. Antonio Vergari (Grade: 78%).
• Machine Learning Practical group project on *Assessing the Robustness of Neuro-Symbolic Modelling in the CLEVR-Hans3 Dataset* (Grade: 76%)
• Notable courses: Machine Learning and Pattern Recognition, Probabilistic Modelling and Reasoning, Reinforcement Learning
• STEM Ambassador: tutor at the Sudanese Hayes Community and volunteer at the 2023 Edinburgh Science Festival's MENACE event.

2013 – 2019 📑 **American School of Guayaquil**
• "Best Student" award for obtaining highest grade (9.86/10) in the Class of 2019 and IB Diploma 38/45

Experience

2023 – · · ·   🔖   **Competitive deep learning**, where I participate in competitions/hackathons focused on biomedical tasks:
- BioxML Hackathon on predicting molecular similarity for Enveda Biosciences
- Ensemble of fine-tuned models for melanoma classification at *ISIC 2024*
- One Vs. All classification of severity of MRI spine lesions *RSNA 2024*
- Segmentation of renal blood vessels at *SenNet + HOA 2024*

2022 – · · ·   🔖   **AI for Latin American Youth**, where I teach programming and AI targeted to the Latin American audience.
- Film videos on programming posted on my YouTube channel *Class Notes*, with transcripts and code found at my GitHub website.
- Gave a discussion introducing neurosymbolic AI to an AI club from my hometown's ESPOL university.

2021 – · · ·   🔖   **Junior researcher** undergoing personal projects revolving AI for healthcare:
- Text-to-SQL app built using Dart (for IOS-Android cross-platform compilation)
- Framework for collaborative medical visual question answering through multiple language models
- Personal blog on the applications, philosophy and education of AI.
- Discord server, aithos, on disseminating AI for social good, alignment and education.

2018 – 2019   🔖   **Volunteer teacher** at Robert Allan Reed Center for Adults with Unfinished Education at the American School of Guayaquil.
- Taught adults ranging from 18 - 50+ years old every Saturday, teaching mainly in the fields of math

Skills

Languages   🔖   Professional proficiency in Spanish, English and fluent in Chinese.

Programming   🔖   Python, Unix, R, Java, LaTeX, Dart, Jekyll, HTML, SQL, Haskell

ML/DL   🔖   PyTorch Lightning, high-performance computing, probabilistic programming, Bayesian optimization

Hobbies

Books   🔖   *Consilience: The Unity of Knowledge*, *Deep Medicine*, *The Master Algorithm*, *The Forty Rules of Love*, among others

Activity   🔖   Rowing, biking, ping-pong, chess, anime