

Xuelong An

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🐙 GitHub

📺 Class Notes

🌐 <https://awxlong.github.io>



Education

2023 – 2024

- 📖 **Master of Science** in Artificial Intelligence for Biomedicine and Healthcare.
 - Master project: *G0-arrest biomarker prediction from colon whole-slide images through multiple-instance learning*
 - UCL Nexus Lab: *Segmentation of blood vessels from 3D images of human kidneys through transfer learning*
 - AI for Biomedicine and Healthcare: *Concept-bottleneck modelling for interpretable melanoma classification.*
 - Applied AI: *Schizophrenia classification from brain anatomical data through Bayesian optimization.*
 - Probabilistic modelling, Bayesian deep learning

2019 – 2023

- 📖 **Master of Arts with Honors – 2:1 Class Division** in Cognitive Science.
 - Thesis title: *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

Personal Projects





2023 – ...

- 📖 **Kaggle competitor**, where I participate in competitions focused on biomedical tasks, learning from a lot of creative problem-solvers in the community, e.g.:
 - Ensemble of fine-tuned models for melanoma classification at *ISIC 2024*



Personal Projects (continued)

- 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:
- Participant of the UCL-FHIR Hackathon where I proposed using a Text-to-SQL dataset to train a NLP model that translates natural language queries to structured syntax to facilitate querying medical databases.
 - Maintaining a personal blog where I publish articles revolving AI, including my review on *Deep Medicine* by Dr. Eric Topol, reflections on the Virtual Neurosymbolic Summer School 2023 organized by IBM research scientist Asim Munawar.
 - Various presentations, where I publish slides, scripts and thoughts I shared during lab meetings.
- 2020 – ...  **AI, AGI, and Ai**, which is a work-in-progress where I discuss the consilience of knowledge in AI with biology, how it helps us understand ourselves, AGI and love (pronounced 'ai' in Chinese)
- 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, Haskell
- ML/DL  PyTorch Lightning, high-performance computing, probabilistic programming, Bayesian optimization
- Misc.  Research, writing, teaching.

Hobbies

- Books  Favorite books include *Consilience: The Unity of Knowledge* by Dr. Edward O. Wilson, *The Master Algorithm* by Pedro Domingos, *Deep Medicine* by Dr. Eric Topol, among others
- Activity  Rowing, biking, ping-pong, chess