Yuning Wang

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LinkedIn | Google Scholar | Website

Education

- **University of Cambridge** — Cambridge, UK
  Information and Computer Engineering, BA (Hons) and MEng; First Class — *Oct 2024 – Jul 2028*
  - Core: Signal Processing, Inference, Information Theory, Systems and Control.
  - Interdisciplinary: Molecular Bioengineering, Neuroscience, Mathematical Methods.
  - Coursework: Stochastic Signal Processing, Bayesian Inference and Classification.

- **High School Affiliated to Renmin University of China** — Beijing, CN
  Cambridge International A-Level; GPA: 4.0/4.0 — *Sep 2021 – Jul 2024*

Publications

- R. Sokolovskii, C. Stelz, **Y. Wang**, B. Bettisworth, V. Nguyen Hoang, S. Martin, T. Heinis, O. Kozlov, B. Minh, A. Stamatakis, Z. Yang, and N. Goldman. (2026). DGM Is Dead; Long Live DGM-Star! A Quantization-Theoretic Approach to Gamma Rate Discretization. *Submitted to Systematic Biology.* Preprint: bioRxiv 2026.10.30.763052.

Experience

- **European Bioinformatics Institute** — Cambridge, UK
  Student Researcher — *Aug 2026 – Oct 2026*
  - Working on maximum-likelihood phylogenetic estimation with rate heterogeneity in Goldman Group.
  - Implemented and verified a new Gamma rate discretization method (DGM-Star) in RAxML-NG on a large HIV dataset to reduce the inference bias, and corroborated with IQ-TREE team.
  - Analyzed DGM-Star's performance during inference theoretically and numerically, visualized and presented the results in an academic paper standard.

- **Imperial College London** — London, UK
  UROP Researcher — *Jul 2026 – Sep 2026*
  - Supervised by Dr. Roman Sokolovskii and Prof. Thomas Heinis, working on DNA error-correction coding.
  - Analyzed and modelled DNA storage channel and its capacity from experimental sequencing datasets.
  - Built a spatially-coupled low-density parity-check (SC-LDPC) code over GF(4) for encoding and decoding DNA nucleotides, approaching channel capacity.

- **A*STAR Institute of Infocomm Research** — Singapore, SG
  Research Intern — *Jul 2025 – Sep 2025*
  - Supervised by Dr. Qianli Xu and Dr. Cheston Tan, working on artificial theory of mind (ToM) and embodied AI based on Constrained Human-AI Cooperation (NeurIPS 2024), built a multi-modal multi-agent ToM model by integrating the state-of-the-art VLM, LLM, and Bayesian inference model.

Achievements

- **Part IB Prize in Engineering**(2026): Awarded to the student who has shown greatest merit in Part IB of the Engineering Tripos.
- **Robinson College Scholarship**(2025, 2026): College prize and scholarship in recognition of first and second year first class Tripos results.

Skills

- **Programming**: Python, LaTeX, Git, Matlab **Languages**: English, Mandarin