



Tenure-Track Assistant Professor

Yale School of Medicine
Biomedical Informatics & Data Science

Visiting Professor

EPFL School of Computer Science
Machine Learning & Optimization Lab

July 28, 2024

Job Description

[Postdoc in applied & theoretical AI/ML]

Biomedical Informatics & Data Science
Yale School of Medicine
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The **Laboratory of Intelligent Global Health and Humanitarian Response Technologies (LiGHT)** is looking for **exceptional, multi-talented AI/ML postdocs** to develop **implementable predictive models adapted to low-resource settings and humanitarian response**.

The role leads a mission for further instilling academic rigor and innovation into implementable digital global health technologies and developing inclusive interdisciplinary needs-based design of new methods.

ABOUT YALE

The Department of Biomedical Informatics and Data Science [BIDS] in the Yale School of Medicine [YSM] has a mandate to create research, teaching, and service that ensures equity in the digital transformation of healthcare.

YSM, established in 1810, is a leading institution combining education, research, and clinical practice. With a long-standing commitment to excellence, it provides a dynamic environment with work recognized globally by several Nobel prizes and practice-changing innovation. Employees at Yale have the opportunity to work alongside respected scholars and top students and participate in a diverse range of programs.

ABOUT LiGHT

LiGHT is a global community of exceptional academics, humanitarians, clinicians, volunteer open-source enthusiasts, and global health specialists. Our lab participates in the full cycle of implementable data-driven global health research, from clinical studies in LMIC communities to innovating novel optimization strategies that adapt our tools to these settings.

We build technologies that ensure local data ownership, and co-design tools with our long-term collaborations in South Africa, Tanzania, Rwanda, Nigeria, Switzerland, Namibia, Senegal, and several NGOs. Our group maintains a large portfolio of open-source technologies and foundation models, and we are committed to leveraging academia to ensure sustainable, implementable innovation to improve health care in resource-limited settings.

YOUR PROFILE

- Exceptional, energetic, and organized with a high socio-emotional intelligence
- Growth mindset and passion for providing social good at individual and global scales
- Deep understanding of the theoretical foundations of deep learning and interest in sharing knowledge and supervising students in a multi-project lab
- Curious about the latest methodological AI research and regularly following and participating in ICML, NeurIPS ICLR etc.
- Ability/interest to travel frequently to Sub-Saharan Africa
- Enthusiastic about interdisciplinary teaching opportunities



YOUR MISSION

- Collaborate closely with research staff on cutting-edge deep learning algorithms and software development
- Support research staff in transitioning research prototypes to production-grade software tools
- Implement and promote best practices for sustainable and maintainable software development
- Write and contribute to publications and reports
- Supervise and mentor students, fostering a collaborative and innovative research environment

THE FOCUS AREAS

- Equitable data management in low-resource settings (equitable, fair, provably privacy-preserving, carbon-aware federated learning which is robust to data shifts of imperfect interoperability and capable of large-scale multimodality)
- Multimodal LLMs
- LLM validation and explainability
- Machine unlearning
- Implementable optimization techniques that reduce their computational cost for equitable access and use in low-resource settings

SKILLS REQUIRED

- Fluent communication in English (speech and writing)
- Extensive experience in scientific writing and publication
- PhD in AI/ML/CS

SKILLS PREFERRED

- Digital health experience

WE VALUE

- Creativity
- Passion
- Humor
- Kindness
- Organization
- Rigor
- Autonomy
- Diversity
- Openness&Transparency
- Adventure
- Generosity
- Hard work

WE OFFER

An exciting and dynamic environment in a very talented and motivated international team. Strong potential impact in research, applications, and the open-source community.

Start date: ASAP
Term of employment: Fixed-term
Work rate: 100% (Must be based in the US)
Duration: 1 year fixed-contract. with possible extension

APPLY: via the LiGHT lab website <https://www.yale-light.org/join-us>

