

**Assistant Professor**

Yale School of Medicine  
Biomedical Informatics & Data Science

**Visiting Professor**

EPFL School of Computer Science  
Machine Learning & Optimization Lab

December 27, 2023

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**Job Description**

**[Postdoctoral Researchers in applied and theoretical AI/ML/DS]**

Biomedical Informatics & Data Science  
Yale School of Medicine  
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The **Laboratory of Intelligent Global Health Technologies (LiGHT)**, (<https://www.yale-light.org/>) at Yale University is looking for **exceptional, multi-talented AI/ML postdocs** to develop implementable predictive models adapted to low-resource settings and humanitarian response.

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**ABOUT YALE**

The Section of Biomedical Informatics and Data Science [BIDS] in the Yale School of Medicine [YSM] is driving research to ensure 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.

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**ABOUT LiGHT**

LiGHT is a research lab that focuses on using data science to improve health care in resource-limited settings. We work with university hospitals and international NGOs and have a large and diverse project portfolio, which includes running clinical trials to validate our tools in the field.

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**YOUR PROFILE**

- You are exceptional
- You have a Ph.D. in some combination of DS/ML/AI/CS and have acquired diverse skills in all.
- You are passionate about research and teaching
- You want to create impactful tools for humanitarian and low-resource settings
- You are comfortable in a multi-project lab with a dynamic young international environment

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**YOUR MISSION**

Development in close collaboration with research staff working on cutting-edge deep learning algorithms and software  
Support research staff to transition research prototypes to production-grade software tools  
Implement best practices for sustainable and maintainable software development  
Education and support for research staff and students in software development



**THE FOCUS AREAS** (no specific experience needed here, you can learn on the job, just FYI)

We have a range of projects that focus on 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)

We work with multimodal models (including LLMs) and are interested in creating implementable optimization techniques that reduce their computational cost for equitable access and use in low-resource settings.

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**SKILLS REQUIRED**

- Strong practical experience (ideally Python plus other languages too), and good expertise with at least one common ML framework
  - Open source and software design expertise
  - Fluent English in speech and writing
  - Effective team player
  - PhD degree in computer science or equivalent.
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**SKILLS PREFERRED**

- Knowledge in one or more of the areas of machine learning, deep learning, distributed computing, p2p networks, decentralized systems, PyTorch, jax, TensorFlow (in particular .js), web stack, and public cloud environments.
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**WE VALUE**

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

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

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**Start date :** ASAP  
**Term of employment :** Fixed-term  
**Work rate :** 100% (onsite/hybrid. 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>

