JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

Subject: Seeking Experienced Developer for BodyMaps Program

Non-PAID

Dear All,

I hope this message finds you well. We are thrilled to extend an opportunity to join our team at the Johns Hopkins University in developing a three-dimensional atlas of the human body, BodyMaps. We are actively seeking several skilled and passionate developers to contribute to the software engineering aspect of this program.

1 | About the BodyMaps Program

BodyMaps is a rigorously mentored research program at the convergence of Artificial Intelligence (AI) and Medicine, hosted at the Computational Cognition, Vision, and Learning (CCVL) lab. It welcomes students, researchers, clinicians, and developers around the world. Over **6 to 9 months**, candidates will engage in high-impact research, receiving training and working in small interdisciplinary teams.

This fast-paced program requires a commitment of **10-15 hours weekly**, including a large group meeting once a week and two smaller project meetings. Candidates will learn how to manage a research project from conception to co-authoring a manuscript, gaining expertise in the latest medical AI research.

2 | Mentors

Prof. Zongwei Zhou is the director of the BodyMaps program, and directly mentors each project. The program is overseen by highly qualified mentors who are experts in their respective fields. Each project is assigned one or more mentors, ensuring access to top-tier expertise and direct mentorship.

- Zongwei Zhou, PhD | Assistant Research Professor | Johns Hopkins University
- Pedro R. A. S. Bassi, PhD | Postdoctoral Fellow | Johns Hopkins University
- Yucheng Tang, PhD | Senior Research Scientist | NVIDIA

JHU students can get research units with Prof. Zongwei Zhou.

Computational Cognition, Vision, and Learning (CCVL)
248 Malone Hall | 3400 N. Charles Street | Baltimore, MD 21218-2686 | zzhou82@jh.edu

3 | How to Apply

Interested candidates should submit a resume/CV, your project preference (choose one out of the three projects below), and a demo showcasing relevant skills to Prof. Zongwei Zhou at zzhou82@jh.edu. The demo should highlight your abilities, though it need not be comprehensive.

There is no specific submission deadline; you can start the project at any time, provided the submitted results meet the criteria aligned with our expectations.

The position can be either in-person or remote, though in-person participation is preferred.

Project 1 | Web-based applications—CT viewer

This project is to develop a web-based application that can visualize CT scans and per-voxel annotated structures, similar to 3D Slicer but can be used via a browser. To apply, please prepare a demo of a website that can load and visualize the CT scans and masks provided here.

Project 2 | Web-based applications—AI inference

This project is to evaluate cutting-edge AI models based on the CT scans uploaded by users through browser. To apply, please prepare a demo of website that runs inference similar to this example using our AI prototype (download) and CT scans (download).

Project 3 | Desktop applications—VR/AR & computer graphics

This project is to integrate CT scans and per-voxel annotated structures into virtual/augmented reality technology. An example can be found at this video produced by Medicalholodeck AI. To apply, please prepare a demo that can load, visualize, and interact with the CT scans and masks provided here.

Thank you.