Ph.D./M.S./Intern Positions in Case Western Reserve University: Hardware-Software Co-Design for Efficient Deep Learning

Position Overview

The research group of Prof. Gourav Datta, an Assistant Professor in the ECSE department at Case Western Reserve University, is currently working on energy-efficient computer vision and multimodal deep learning for a wide range of applications (e.g., smart healthcare). We focus on cutting-edge research including:

- Multi-modal KV cache compression
- Retrieval Augmented Generation
- Model deployments on embedded edge devices (FPGAs, microcontrollers)
- Emerging computing paradigms (in-sensor and neuromorphic computing)

Required Skills

- Strong programming experience in PyTorch/TensorFlow for software-focused projects
- Hardware design experience (HLS/Verilog) for hardware-focused projects
- Python proficiency
- ML compiler or model deployment experience is a plus

Available Positions Starting Summer 2025/Fall 2025/Spring 2026

- Ph.D. Students (with funding)
- M.S. Students
- Research Interns

Note: While funding support is primarily for PhD students, exceptional M.S. students/interns with strong research experience may also be offered paid positions.

How to Apply

Please email Prof. Gourav Datta (gourav.datta@case.edu) with:

1. Subject line: *Applying to Work on ML HW-SW Co-design*
2. Specify desired position (Ph.D./M.S./intern)
3. Attachments:
    - Current CV
    - Academic transcripts

4. Cover letter including:
    - Motivation for joining our group
    - Relevant experience in ML/hardware (courses, projects, papers, internships)

Lab Expectations

What We Expect

- Self-motivation and research curiosity
- Strong problem-solving abilities in coding and mathematics
- Excellent communication and responsiveness

What We Offer

- Comprehensive research guidance (ideation, implementation, publication)
- Full funding support (for Ph.D. students and exceptional M.S. students/interns) and computing resources
- Collaborative and supportive lab environment

For more information, please see Prof. Datta's webpage here and Prof. Datta's google scholar here.