ICICLE
DEMOCRATIZING AI

Intelligent Cyberinfrastructure with Computational Learning in the Environment (ICICLE) & OSU CSE Distinguished Seminar Series

THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

"BisQue : A Comprehensive Cloud-Based Image Processing Software Infrastructure"

Prof. B. S Manjunath

B.S. Manjunath holds a B.E. in electronics engineering from Bangalore University, M.E. in systems science and automation from the Indian Institute of Science, and a Ph.D. in electrical engineering from the University of Southern California. He is currently a Distinguished Professor and Chair of the Electrical and ComputerEngineering (ECE) Department at the University of California, Santa Barbara, with an affiliated appointment in Computer Science.
His research focuses on computer vision and machine learning, with extensive applications across various scientific fields. Manjunath has been instrumental in developing BisQue, a robust, open-source cloud-based platform designed for reproducible computer vision.
He has supervised over 50 PhD theses, authored more than 350 peer-reviewed publications, and holds 25 US patents. His contributions to the field have been recognized with the 2020 IEEE CS Edward J. McCluskey Technical Achievement Award . He is a fellow of IEEE, ACM, AIMBE
(American Institute for Medical and Biological Engineering), and the National Academy of Inventors (NAI).

Abstract: BisQue is a specialized cloud infrastructure designed for advanced computer vision and machine learning applications, offering robust features for the curation, annotation, and sharing of multimodal imaging data and computational methods. It caters to a wide array of scientific fields including materials science, marine sciences, neuroscience, and bio & medical imaging, as well as remote sensing. The system is underpinned by a microservices architecture integrated with Kubernetes and Argo workflows, enhancing scalability and efficient resource management. BisQue leverages this framework to support both GPU and CPU workloads effectively across different cluster nodes. This presentation will discuss the rationale behind developing this softwareI Infrastructure and showcase its diverse applications in fields like medical imaging and environmental science. The latest version, BisQue 2.0, is available online as a service, and both its source code and documentation can be accessed through github.

When: May 9, 2024 12:00 PM-1:00 PM EST
ENG DL 480 Conference Room

Zoom link:

https://osu.zoom.us/j/97892526194?pwd=REs3WG4vbnlETW56K1pNNlMrdnhFdz09