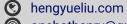
# Hengyue (Henry) Liu Ph.D. @ UCR



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# Summary —

- Ph.D. New Graduate 2024
- Research-related positions
- Full-time or Contractor
- · Willing to relocate

#### Research Interests —

- Scene Graph Generation
- Foundation Models
- Generative Models
- · Open World Learning

#### Prior Research ——

- · Video Foundation Models
- Scene Graph Generation
- Long-tailed Learning
- Object Detection
- Human Pose Estimation
- Mobile Vision

### Skills ——

- Python
- C/C++
- PyTorch
- TensorFlow
- OpenCV
- Matlab
- Docker
- Kubernetes
- Git

#### Patents ——

B. Bhanu, H. Liu, and R. Li, Athlete style recognition system and method, US Patent 11,544,928, 2023.

# Education

2017 - Present	Ph.D. in EE	University of California, Riverside	Riverside, CA
2015 - 2016	M.S. in EE	University of Southern California	Los Angeles, CA
2010 - 2014	B.S. in EE	Beijing Univ. of Posts and Telecoms.	Beijing, China

#### **Publications**

- H. Liu, K. Min, H. A. Valdez, and S. Tripathi, "Contrastive Language Video Time Pre-training." ArXiv. 2024.
- [2] H. Liu and B. Bhanu, "RepSGG: Novel Representations of Entities and Relationships for Scene Graph Generation," TPAMI, 2024.
- [3] H. Liu, S. Parajuli, J. Hostetler, S. Chai, and B. Bhanu, "Dynamically Throttleable Neural Networks," Machine Vision and Applications, 2022.
- [4] H. Liu and B. Bhanu, "JEDE: Universal Jersey Number Detector for Sports," IEEE TCSVT. 2022.
- [5] H. Liu, N. Yan, M. Mortazavi, and B. Bhanu, "Fully Convolutional Scene Graph Generation," CVPR, 2021, Oral.
- [6] H. Liu and B. Bhanu, "Pose-Guided R-CNN for Jersey Number Recognition in Sports," CVPRW, 2019.
- [7] T. Gupta, H. Liu, and B. Bhanu, "Early Wildfire Smoke Detection in Videos," ICPR, 2021.
- [8] B. X. Guan, B. Bhanu, R. Theagarajan, H. Liu, P. Talbot, and N. Weng, "Human Embryonic Stem Cell Classification: Random Network with Autoencoded Feature Extractor," Journal of Biomedical Optics, 2021.

# Experience

06/0000	Achieved state-of-the-art ZS results of 35.3 mAP on CharadesEgo.		
06/2024	<ul> <li>Proposed a efficient approach to learning language, video, and tem- poral representations in long-form videos via contrastive learning.</li> </ul>		
-	Python   PyTorch   Kubernetes   Docker		
01/2024	Research Intern, Intel Al Lab San Dieg		

06/2020 Research Intern, Futurewei Technologies Santa Clara, CA |Python| |PyTorch| |Docker|

· Proposed a novel bottom-up fully convolutional scene graph genera-11/2020 tion method [4] that can detect entities and relationships simultaneously with fast inference speed (fastest model achieves ~25FPS).

06/2019 Research Intern, Latent Al Princeton, NJ |Python| |PyTorch|

 Proposed a novel dynamically throttleable neural network [2] that can 09/2019 self-regulate performances and computational load in response to a single heuristic/learnable scalar control signal on vision tasks like image classification, object detection, and gesture recognition.

02/2017 Computer Vision Software Engineer, Frenzy Al Los Angeles, CA |Python| |PHP| |SQL| |AWS|

• Led a team of 5 engineers for building a precise garment visual 08/2017 search system as a team leader and full-stack engineer.

- Played a pivotal role in the company's seed funding and patent.
- Implemented RESTful APIs and back-end models for human pose estimation and object recognition to identify garment in images.
- Computer Vision Intern, CloudSight 05/2016 Los Angeles, CA |Python| |C++| |Torch/Lua| |OpenCV| |Docker|

• Designed a dense circular object detection and counting algorithm. 12/2016

- Implemented a text sentiment classification model.
- Implemented an image retrieval system with BoW and TF-IDF.