CHAN HEE (LUKE) SONG

https://chanh.ee

5749990746 ⋄ song.1855@osu.edu

EDUCATION

The Ohio State University *August 2020 - December 2025 (Expected)*
Doctoral Student in Computer Science
Advisor: Professor Yu Su

University of Notre Dame *May 2020*
Bachelor of Science in Computer Science
Advisor: Professor David Chiang

RESEARCH INTERESTS

- Embodied AI
- Large {Language, Multimodal} Models

SELECTED PUBLICATIONS

[1] RoboSpatial: Teaching Spatial Understanding to 2D and 3D Vision-Language Models for Robotics
Chan Hee Song, Valts Blukis, Jonathan Tremblay, Stephen Tyree, Yu Su, Stan Birchfield
under submission [paper]

[2] VisualAgentBench: Towards Large Multimodal Models as Visual Foundation Agents
Xiao Liu, Tianjie Zhang, Yu Gu, Iat Long Iong, Yifan Xu, Xixuan Song, Shudan Zhang, Hanyu Lai, Xinyi Liu, Hanlin Zhao, Jiadai Sun, Xinyue Yang, Yu Yang, Zehan Qi, Shuntian Yao, Xueqiao Sun, Siyi Cheng, Qinkai Zheng, Hao Yu, Hanchen Zhang, Wenyi Hong, Ming Ding, Lihang Pan, Xiaotao Gu, Aohan Zeng, Zhengxiao Du, **Chan Hee Song**, Yu Su, Yuxiao Dong, Jie Tang
under submission [paper]

[3] Dual-View Visual Contextualization for Web Navigation
Jihyung Kil, **Chan Hee Song**, Boyuan Zheng, Xiang Deng, Yu Su, Wei-Lun Chao
In *CVPR 2024* [paper]

[4] BioCLIP: A Vision Foundation Model for the Tree of Life
Samuel Stevens, Jiaman Wu, Matthew Thompson, Elizabeth Campolongo, **Chan Hee Song**, David Carlyn, Li Dong, Wasila Dahdul, Charles Stewart, Tanya Berger-Wolf, Wei-Lun Chao, Yu Su
In *CVPR 2024* **Best Student Paper Award** [paper]

[5] LLM-Planner: Few-Shot Grounded Planning for Embodied Agents with Large Language Models
Chan Hee Song, Jiaman Wu, Clayton Washington, Brian M. Sadler, Wei-Lun Chao, Yu Su
In *ICCV 2023* [paper] [Embodied AI workshop, CVPR 2023]

[6] One Step at a Time: Long-Horizon Vision-and-Language Navigation with Milestones
Chan Hee Song, Jihyung Kil, Tai-Yu Pan, Brian M. Sadler, Wei-Lun Chao, Yu Su
In *CVPR 2022* [paper]

WORKSHOPS

[1] SalsaBot: Towards a Robust and Generalizable Embodied Agent
Chan Hee Song, Jiaman Wu, Ju-Seung Byun, Zexin Xu, Vardaan Pahuja, Goonmeet Bajaj, Samuel Stevens, Ziru Chen, Yu Su.
In *Embodied AI Workshop, CVPR 2023* [paper]

[2] Understanding Mimicry in Butterflies from Images using Machine Learning
Reshma R Babu, Yael Stochel, Christopher Lawrence, Daniel Rubenstein, Chuck Stewart, Wei-Lun Chao, David Carlyn, Jihyung Kil, Yu Su, **Chan Hee Song**, Anuj Karpatne, Mohannad Elhamod, Krzysztof Kozak, Owen McMillan, Tanya Berger-Wolf.
In *CV4Animals Workshop, CVPR 2022* [poster]

WORK EXPERIENCES

Nvidia Robot Visual Perception Group   May 2024 - August 2024
Research Intern
· Worked on spatial reasoning with 2D/3D MLLMs for robot workflows. Submission for CVPR 2025.
· Mentors: Valts Blukis, Jonathan Tremblay, Stephen Tyree, Stan Birchfield

Adobe Research   May 2023 - August 2023
Research Scientist Intern
· Worked on an open-domain code generation and video editing assistant with large language models to be integrated into Adobe CC products.
· Mentors: Gang Wu, Haoliang Wang, Uttaran Bhattacharya, Saayan Mitra

Human Language Technology Center of Excellence @ JHU   May 2019 - August 2019
Visiting Researcher, participant of SCALE
· Introduced a lexical feature generated from gazetteers (lists) to named entity recognition (NER) systems.
· Mentors: Nicholas Andrews, Dawn Lawrie, James Mayfield, Tim Finin

Kyndi, Inc. / San Mateo, CA   January 2019 - May 2019
Software Engineering Intern
· Worked on building a system that turns unstructured text data into a knowledge graph and perform NER & QA.

GRANTS

Amazon: Alexa Prize Simbot Challenge   2022 - 2023
Team Lead   *$250,000*
· Development of next-generation virtual assistants that will assist humans in completing real-world tasks by continuously learning, and gaining the ability to perform commonsense reasoning.
· Co-wrote the grant proposal and led the Ohio State University team.

HONORS, AWARDS & SCHOLARSHIPS

- Best Student Paper Award, CVPR 2024
- AAAI-2020 Student Scholarship
- Research Scholarship from Flatley Center at University of Notre Dame, 2019