

Jialin (Jayleen) Yuan

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Education

Sep.2016 - EXP. Spring 2023	Oregon State University , Oregon, U.S	Ph.D student in Computer Science · Computer Vision
Sep.2010- Mar.2013	Xidian University , Xi'an, China	M.S in Computer Science · Artificial Intelligence
Sep.2006- Jun.2010	Xidian University , Xi'an, China	B.S. in Computer Application Technology

Skills

Programming Languages :	(Proficient) C/C++, Python; (Familiar) Matlab, Java, Bash
Deep Learning Frameworks :	PyTorch, Tensorflow, Keras
Others Tools and Languages :	Git, LaTeX, FPGA, RTL

Projects

► Research on topic 'Deep Object Discovery'

- Research on Vision-Language understanding task and proposed a method to effectively learn the united semantic information from asymmetric modalities. A paper submitted to CVPR 2023.
- Research on Unsupervised Video Object Discovery task and proposed a method to efficiently improve performance in the detect-propagate paradigm. A paper submitted a paper to CVPR 2023.
- Research on Instance Segmentation task, Proposed a search-free Instance semantic Segmentation algorithm accepted on NeurIPS 2020 ([Paper Link](#)).

► Lead on developing the Plant Phenotyping method for GWAS in *Populus trichocarpa*

- Developed a web-based image annotator for fast and accurate pixel-wise object and category annotation ([Link](#)).
- Performed plant phenotype analysis with the tool and submitted a paper to PlantPhenomics ([Paper Link](#)).
- Developed an algorithm for root analysis in a GWAS study ([Paper Link](#)).

► Contribute to the DARPA Machine Common Sense Project

- Built perception system for the DARPA Machine Common Sense Project for discovering novel objects of interest from videos.

► Contribute to the design of 4K chip solution on FRC (Frame Rate Conversion) function

- Developed the C model for FRC and support the digital designer to develop its chip solution.
- Led on FPGA validation and chip validation on FRC.
- Supported on PQ tuning and customer support.

Experience

Jun. 2022 Mar. 2022	Research Intern Microsoft Inc, Bellevue, Washington, U.S <ul style="list-style-type: none">► Interned in the ROAR team under Decision AI. Research on the problem of video object segmentation (Paper Link, ECCV 2022) and the problem of Vision-Language content moderation detection (a submission to CVPR 2023).
Sep. 2019 Jul. 2019	Software Engineer Intern Uber Technology Inc, Palo Alto, California, U.S <ul style="list-style-type: none">► Developed Image Style Transfer algorithm using GAN, to augment data in minor categories and address the data imbalance problem.► Included the generated data into the collected dataset to train a scene classification model, it obtained at least 8% improvement on the minor categories without influencing the other categories.
Jun. 2016 Mar. 2014	Algorithm Engineer Kiwi-image Technologies Co, Ltd., Shanghai, China <ul style="list-style-type: none">► Developed algorithm for FRC(Frame Rate Conversion) and OD(Over Drive) modules used in High-end TV solutions and co-worked with Digital Designers for porting to RTL(Register Transfer Language).► Developed a phase-table tool to assist timing control analysis in the FRC module on the chip, it improved the timing tuning efficiency over 10X.► Participated in the development of embedded dynamic software, chip validation, and PQ tuning for customer support.
Mar. 2014 Apr. 2013	Algorithm Engineer Novatek Co, Ltd., Shanghai, China <ul style="list-style-type: none">► Maintained algorithms for 2d-to-3d, free-3d, and image compression modules used in TV solutions. Built their bit-true C-models for RTL comparison and the embedded dynamic software used in Chip.