Wenxiao(Robin) Cai

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EDUCATION

Southeast University(SEU), Nanjing, China   Sep 2020 – Present
B.S. in Engineering, Automation (in progress)   GPA 3.94/4 RANK 1/112

University of California, San Diego(UCSD), San Diego, United States   Mar 2023 – Present
Exchange Student(in progress)
Honors:
● Presidential Scholarship | SEU   ● Perfection Student Scholarship, 2021 and 2022 | SEU
● University-level Merit Student | SEU   ● CUPT First Prize in East China
● Presidential Scholarship | High School Affiliated to Nanjing Normal Univerisity
Related Coursework:
● Artificial Intelligence   ● Algorithms   ● Data Structure   ● Optimization   ● Linear Control System
● Algebra and Geometry   ● Signal Processing   ● Natural Language Processing   ● Microcomputer
● Machine Learning with R (UCLA 2021)
Services:
President of SEU LabVIEW Club

PUBLICATIONS

UAV Image Stitching by Estimating Orthographic Projection with RGB Cameras
Wenxiao Cai, Songlin Du, and Wankou Yang
Under review in Journal of Visual Communication and Image Representation from Oct, 2022

VDD: Varied Drone Dataset for Semantic Segmentation
Wenxiao Cai, Ke Jin, Jinyan Hou, Cong Guo, Letian Wu, Wankou Yang
Under review in ICCV 2023

RESEARCH EXPERIENCES

Student researcher of computer vision at OneCoLab   SEU | July 2021 – Present
● Worked with Prof. Wankou Yang on drone image processing.
● Designed a novel method for low-altitude drone image stitching aided by semantic information.
● Collected and annotated a high-resolution drone image dataset for semantic segmentation. Designed a deep-learning baseline model DeepLabT.

COURSE PROJECTS

Article key sentence extraction software   Jan 2021 – June 2021
● Designed a machine learning algorithm based on AP, Kmeans and mean-shift to extract key sentences from articles.
● Developed a pyqt-based software with full file reading, language processing and parameters setting functions.

Packing problem algorithm in industrial applications   July 2021 – Sep 2021
● Designed a novel algorithm to solve NP-hard packing problems.
● Developed a software of processing and 3D display of packing problems, and applied it in a factory in Nanjing.

Optimization of AGV scheduling problem   Sep 2021 – Jan 2022
● Built a model for, simulated and visualized Aumotated Guided Vehicles (AGV) operations in logistics factories with Matlab Simulink
● Optimized the problem in limited conditions

SKILLS

- Programming Languages: Python, C, C++, Matlab, R, Assembly
- Languages: English - Fluent(TOEFL 108, GRE 330), Mandarin - Native speaker