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 • Software
• Algebra and Geometry • Signal Processing • Natural Language Processing • Microcomputer
• Machine Learning with R (UCLA 2021)

Services:

President of SEU LabVIEW Club

Research Experiences

Computer vision researcher at OneCoLab **SEU** | July 2021 – Present

• Worked with Prof. Wankou Yang on drone image processing.
• Designed a novel method for drone image stitching aided by semantic information. *First-authored paper currently under review in Journal of Visual Communication and Image Representation from Oct 2022.*
• Collected and annotated a drone image dataset for semantic segmentation. *First-authored paper currently under review in ICCV 2023.*

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