Daitao Xing

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Education

Global Ph.D student, Computer Science.   2018-present

NYU Abu Dhabi & NYU Tandon School of Engineering, New York University

GPA: 3.89/4

Research Area: Intelligent Drone Based System and Application

Research Project: Real-Time Object Detection and Tracking on Mobile Platforms (Robots, Drones)

- The main purpose of the project is to locate and track objects from multimodal sources (RGB, Thermal, Audio, Lidar) and integrate those methods into drone systems to assist obstacle avoidance, navigation, autonomous delivery, area surveillance, event detection, etc...

Master of Science, Computer Science,   2016-2018

Tandon School of Engineering, **New York University**

GPA: 3.74/4

Main Courses: Analysis of Algorithms; Theory of Computation; Operating Systems; Computer Vision; Principles of Database System; Information Visualization.

Capstone Project: Dressing Attribute Parsing

- Extracting fashion attributes from images of people wearing clothing by collecting features from textual and predicting labels of pixels.

Bachelor of Science, Information and Computing Science   2011-2015

China Minzu University

GPA: 3.87/4

Main Courses: Applied Mathematic; Statistic; Programming.

Capstone Project: The evaluation of traditional Chinese medicine manual instruction

- Conducting descriptive statistical analysis to validate the reliability of instruction.

Work Experience

Research Assistant, **Multimedia and Visual Computing Lab, NYU**   2017-2018

- Developed scene text detection and localization method from images for automated information retrieval.

Data Engineer, **Transwarp Technology Shanghai Co Ltd**   2015-2016

- Applied statistical analysis and big data management tools to build intelligent market solutions for commercial usage including potential customer identification, fraud detection and intelligent traffic system .
- Built data organization and visualization platforms to assist decision making.

Teaching Assistant Intern, **Data Science Academy in New York**   2014-2015
- Teaching classes including: Statistics with R, Python, Machine Learning, Hadoop & Spark,.
- Student mentor providing support for their capstone projects;

Awards & Activities

Second prize of Drone vs Bird Challenge   2022
First prize of Dubai World Challenge For Self-Driving Transport   2022
Invited Talk about Object Detection and its application in NYUAD   2021
New York University Abu Dhabi Research Travel Award   2021
New York University Abu Dhabi Global PhD Fellowship   2018-2022
New York University Graduate Scholarship   2016-2018

Publication

[1] **Daitao Xing**, Halil Utku Unlu, Nikolaos Evangeliou, Anthony Tzes.
"**Drone Surveillance using Detection, Tracking and Classification Techniques**" ICIAP 2022
Abstract: A real-time Drone Surveillance System

[2] **Daitao Xing**, Athanasios Tsoukalas, Nikolaos Evangeliou,Nikolaos Giakoumidis, Anthony Tzes.
"**Siamese Adaptive Transformer Network for Real-Time Aerial Tracking**" ICUAS 2022
Abstract: An transformer based object tracker which is optimized for mobile devices and runs real-time on cpu end.

[3] **Daitao Xing**, Nikolaos Evangeliou, Athanasios Tsoukalas, Anthony Tzes.
"**Siamese Transformer Pyramid Networks for Real-Time UAV Tracking**" WACV 2022
Abstract: An transformer based object tracker which is optimized for mobile devices and runs real-time on cpu end.

[4] **Daitao Xing**, Athanasios Tsoukalas, Nikolaos Giakoumidis, Anthony Tzes.

Computationally Efficient RGB-T UAV Detection and Tracking System   ICUAS 2021

Abstract: A tracking system which combines detection, tracking by utilizing different sources including RGB and Thermal images.

[5] Nikolaos Evangeliou, Nikolaos Giakoumidis, Dimitris Chaikalis, Athanasios Tsoukalas, Halil Utku Unlu, **Daitao Xing**, Anthony Tzes.

"**Mechatronic design of a delivery octorotor drone**".   **ICARA 2022**

*Abstract: We design an algorithm for the intelligent transportation system
capable of recognizing and avoiding dynamic obstacles, grasping and releasing a package.*

[6] **Daitao Xing**, Nikolaos Evangeliou, Athanasios Tsoukalas, Anthony Tzes.

A Siamese Network for Real-Time Object Tracking on CPU   Journal

Abstract: A Pytorch based implementation for real-time object tracking on mobile devices. Optimization with Opencv, ONNX, etc. The speed achieves 46 Fps with single I7 core and performs state-of-the-art results.

[7] Athanasios Tsoukalas, **Daitao Xing**, Nikolaos Evangeliou, Nikolaos Giakoumidis, Anthony Tzes

Deep learning assisted visual tracking of evader-UAV   ICUAS 2021

Abstract: YOLO v4 tiny based drone detection and tracking module

[8] **Daitao Xing,** Zichen Li,Xin Chen,Yi Fang.

"**Arbitext: Arbitrary-oriented text detection in unconstrained scenes**".   Arxiv, 2018.

Abstract: We develop a method to localize arbitrary-oriented text from unconstrained nature scene images. The method improved the automated information retrieval efficiency.

Skills

Programming skills: PyTorch, Python, C++, CUDA, ROS, TensorFlow, Spark, SQL
Softwares: R, SAS, Unity3D, Matlab, OpenCV, Git, Hardoop