Yutong (Oliver) Xu
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Education

New York University | New York, NY *September 2022 – May 2024*
M.S. in Data Science

New York University | New York, NY *September 2018 – May 2022*
B.A. in Mathematics GPA: 3.5
Minor in Computer Science

Experience

Center for Neural Science at New York University | NY *December 2019 – May 2022*
Research Assistant
- Collaborated on project investigating retinal flow in natural locomotion
- Implemented computer vision algorithms in Python and MATLAB to process and analyze field data
- Developed MATLAB simulations of natural locomotion to generate auxiliary data for hypothesis testing
- Created MATLAB and Python scripts to visualize data and results

Maxvision Technology Corp. | Wuhan, China *July 2019 – August 2019*
Computer Vision Research Intern
- Researched state-of-the-art methods in artificial intelligence for 3D face recognition and verification
- Processed image databases in Python to train and test machine learning and computer vision algorithms

Garcia Research Program at Stony Brook University | NY *June 2015 – September 2017*
Student Researcher
- Collaborated on project investigating the cytotoxic effects of titanium dioxide nanoparticles; found evidence suggesting nanoparticles did have adverse effects on human cells
- Recorded and analyzed microscopy data; submitted paper to the Siemens Competition and placed as a semifinalist

Projects

Heading perception and the structure of the optic acceleration *May 2022*
Co-authored paper investigating the use of the singularity of the optic acceleration field to estimate heading in a simulated subject. The preprint of the paper is available at doi.org/10.48550/arXiv.2204.12607.

Distance Estimation from RGB Images *October 2019*
Built a deep neural network in Python that generates an estimate for the distance between the camera and specific landmarks in images. Estimates generated by the network correlated directly with the real-world displacement of identified objects. Code available at github.com/lnconsistent/cv-object-distance-estimation.

Skills

Languages MATLAB, Python, Java, C++

Frameworks/Libraries NumPy, OpenCV, PyTorch, SciPy, and others

Achievements and Awards

NYU Tandon School of Engineering Dean's List *2018 – 2019*
National Merit Finalist *2017*
National AP Scholar *2015*
Semifinalist at the Siemens Competition *2015*