

Yan Xu

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EDUCATION

Vanderbilt University, Nashville, TN

May 2022

Bachelor of Science in Computer Science

TECHNICAL SKILLS

Programming Languages

Python, C#, C++, C, Javascript, Java, Matlab, Swift, Prolog, Racket

Relevant Courses

Software Design, Data Structure, Programming Languages, Linux Kernel

Software & Tools

Git, Pytorch, MS Office, Latex, Wireshark, OpenAI gym, Unity, Praat

PROJECT EXPERIENCE

Vanderbilt Aerospace Design Laboratory (VADL)

Jan 2019 - Current

Student Researcher

- Test user interface for representation of plant vegetation index data on Hololens in C#.
- Develop a neural network with custom layers based on NDVI to predict plant health from segmented image using Python and Pytorch. Achieved 70% single pixel classification accuracy.
- Incorporate and modify public Python library to perform semantic segmentation of plants.
- Create dataset from domestic plants in lab and plants on and off campus using Sentera multispectral camera.
- Solve key networking issues between Sentera camera and Hololens using HTTP.

VADL Rocket Team

Nov 2019 - Current

Team member

- Develop an RL agent based on PPO to train a four legged two joint robot in Webots simulator to self-right, tilt, and walk for NASA's student launch competition.
- Proofread proposal submitted to NASA in a tight one week schedule with 10 team members.

Vanderbilt Communication and Language Lab (CALL)

Feb 2020 - Current

Student Worker

- Work on building an online psychology experiment from ground up using PCIBex, a Javascript library for building online psychology experiments.
- Create data structure and serialization methods to facilitate interfacing with API.
- Segment and transcript audio files using Praat, a open-source phonetics analysis software.

Medical-image Analysis and Statistical Interpretation Lab (MASI)

Sept 2020 - Current

Student Observer

- Search for architecture for transfer learning from spherical MNIST to brain image.

VOLUNTEERING

Vanderbilt Baseball Team

Jan 2020 - Aug 2020

Volunteer R&D Researcher

- Perform data analysis on Vanderbilt baseball team's cloud database.
- Research the relationship between spin of baseball and its hit range.