Andy Zhang

Education

Cornell University

B.S., Computer Science // 2016-2020

Relevant Coursework

- Honors Data Structures and OOP, Algorithms, Functional Programming, Signal Processing, Discrete Math, Algebra, Digital Logic

Projects

modemo (in progress)

Web application using NLP to detect and quantify political bias in articles. Made with Python, React/JS, Keras, and Theano.

fmxnet

Modular face analysis program that detects and tracks faces in a video with deep learning. Also performs face attribute extraction. Docker file for easy cross-platform use. Made with Python, Tensorflow, dlib, and mxnet.

baeML

Web application using ML to offer personalized content designed to counteract the echo-chamber effect of social media. Key components include a React frontend, Skip-gram learning model, database, and webcrawler. Made with Python, React/JS, and Tensorflow.

Critter World

Simulation of a world with “critters” modeled by a custom language, compiler, interpreter, and GUI. The world is maintained by a server, and multiple clients connecting to the world can request updates to the world state, which is tracked by a diff. Made with Java.

Visual Yelp

Android app combining Yelp and Google Maps APIs to deliver a visual-oriented restaurant search service. Users can specify a cuisine or a type of food, and choose nearby restaurants based on real pictures of their food.

Personal

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Experience

Computer Vision Intern

SRI International // Summer 2017

- Developed a program to detect, identify, and extract facial features of people in a given video.
- Improved SLAM algorithms for movie-oriented camera pose tracking.
- Created a pipeline for applying deep neural networks for object detection in videos.
- Used Docker to support cross-platform usage.

Computer Vision Developer

Cornell Unmanned Air Systems // Present

- Project team dedicated to designing, building, and testing custom UAVs capable of search-and-rescue missions.
- Implemented a custom segmentation algorithm for filtering and extracting salient targets from pictures taken at high-altitude.

Morphometrics Research Intern

U.C. Santa Cruz // Summer 2015

- Used Fourier Analysis and chain-coding algorithms to quantify and compress the morphology of nautiloids.
- Used Principal Components Analysis to visualize the trends in nautiloid morphology throughout their history.

Skills

Languages

From proficient to novice:

- Java, Python
- JavaScript, HTML/CSS
- MATLAB, R

Libraries

OpenCV, Scikit-learn, Tensorflow, Django, Docker, ROS

Misc.

Git, UNIX, PostgreSQL