

# WANGYANG HE

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211 Carolina Ct, Coppell, TX, USA 75019

Student pursuing masters degree, with U.S. citizenship, seeking major related internship opportunity.

## EDUCATION

**Texas A&M University, College Station, USA**

Master of Science in Computer Science

*January 2021 - December 2022*

Advisor: Dr. Xia (Ben) Hu | GPA: 4.0/4.0

**Texas A&M University, College Station, USA**

Bachelor of Science in Computer Engineering

*September 2016 - December 2020*

## SKILLS & RESEARCH INTERESTS

**Skills:** Python, C++, Java, Tensorflow, Keras, PyTorch, Scikit-Learn, Numpy, Pandas, SQL

**Data Mining:** Blockchain Analysis, Payment Fraud Detection, Time-Series Data Analysis

**Machine Learning:** Automated Machine Learning

## EXPERIENCES

**Texas A&M University, College Station, USA**

*Research Assistant, DATA Lab*

*December 2020 - Present*

*Open Source Python Outlier Detection Package*

Full-stack automated machine learning system for outlier detection on multivariate time-series data:

- Developed neural architecture search for automated outlier detection;
- Developed semi-supervised gradient boosting tree algorithm;
- Created user development guideline with examples on Blockchain transaction analysis, payment fraud detection and cyber security intrusion detection.
- Developed graph visualization features for graphical user interface.

**XiaoShui Intelligence, Beijing, China**

*Software Development Intern*

*May 2019 - Aug 2019*

*Object & Action Detection*

- Participated to develop an action detection system for elderly care facilities to capture elder people's safety in real-time. Implemented with Keras, used VGG16 and Xception CNNs.
- Participated to develop a safety gear detection system for a construction company to detect safety helmets and vests worn on construction sites. Implemented with Yolov3.

## PROJECTS

**TODS** *Automated Time-series Outlier Detection System*

<https://github.com/datamllab/tods>

- An end-to-end system that supports easy pipeline construction with more than 70 primitives for automated machine learning.
- Top three contributor; mentor for new team members; explored neural architecture pipelining combination.
- Open sourced on GitHub, with 450+ stars and 50+ forks.

**MusicFace** *Automated Emotion Playlist Generator*

<https://tx.ag/MusicFace>

- Detection system to generate personal playlist based on age and mood using Flickr & YouTube APIs.

**Smart Homes** *Action and Emotion Detection Project*

- Deep learning project for action and emotion detection used in "Smart Homes".
- Detected actions including coughing, hand washing, falling, cleaning windows, cleaning bathroom and washing feet.
- Implemented with Keras, used Kinetics 700 dataset, built VGG16 and Xception CNNs for base model.
- Found 23000+ clips from 800+ YouTube videos, average accuracy 91.2%, ranked top three overall in the project competition.

**GasDash** *Fuel Tracking Application*

- Web, iOS and Android application for tracking & delivery of fuel trucks, deployed on Google Play Store.
- Implemented using Google Maps API and OpenWeather API, programmed in Dart language.