# Tangyuan Zhang

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## Education

**ShanghaiTech University**                                                          **Sep. 2020 − Present**
*Bachelor of Science in Computer Science*                                                        *Shanghai, China*

## Relevant Coursework

- Data Structures
- Algorithms Design
- Database Management
- Artificial Intelligence
- Machine Learning
- Computer Architecture

## Experience

**Shanghai Luoshu Investments**                                          **August 2022 − December 2022**
*Python Developer Intern*                                                                        *Shanghai, China*
- Participate in the development and maintenance of the company's related business systems.
- Participate in the construction and maintenance of the company's operation platform and operation and maintenance automation platform.
- Participate in the development of data platform and factor platform.

**CAT Lab, ShanghaiTech University**                                    **March 2021 − September 2021**
*Undergraduate Research Intern*                                                                  *Shanghai, China*
- Detection and exploit of vulnerabilities in Android system.
- Focusing on the drawback of the design in accessibility service and apply various techniques to bypass the security mechanism so that retrieve the sensitive information.

## Projects

**FlightAware-flight information scraping** | *Python, Linux, Vue*                             **January 2021**
- By capturing packets and analyzing flight information requests from the flightaware website, we can crawl flight information over a given area. This project is a combination of front and back ends. The backend is based on the python-flask framework, which accepts the coordinates and orientation data input by the front-end user, thereby calculating the coordinate-related parameters of a given area, and uploading it to the flightaware website. Make a post request, get the server response, clean the data, and return it to the front end. At the same time, this project can be combined with the Raspberry Pi. The Raspberry Pi is connected with LED lights, and the preset lighting rules are used to display the relevant information such as the number of flights over the current area.

**Quick DL** | *Python, Flask, Vue*                                                                **May 2021**
- Quick DL can parse the audio of the Weixin official account with one click, the audio of the Wesing, and the M3U8 link of the live playback. By separating the front-end and back-end with VUE+FLASK, using python to make data requests to the specific urls of three major websites, and get the corresponding m3u8 resource links.Taking the official account as an example, WeChat does not officially provide an audio download portal. Through this website, you can get the link corresponding to the audio, which is convenient for users to save on their local devices.

**WeChat official account crawler** | *Python*                                                     **July 2022**
- Use python, requests and other libraries to crawl all historical articles, likes, comments, etc. under a certain WeChat official account. Through packet capture analysis, using the Weixin Official accounts platform as a springboard,first obtain the URL links of all historical articles, and then use the UA of the WeChat client to obtain the number of likes and readings. The difficulty will be that the abunuancrequests from one single ip will bedetected, and the same account request cannot be too frequent,otherwise the response will be temporarily blocked.

**Stock Movement Prediction Based on Social Media Text And Sentimental Analysis** | *NLP*       **December 2022**
- Designed a automatic crawler to retrieve data from Twitter and stock news.
- Designed a efficient way to pre-process collected data and apply feature engineering.
- Implemented several machine learning models(LSTM, XG Boost, RF Regression..) to predict the stock price and make comparison between them to find which achieves the best performance.

## Technical Skills

**Languages**: Python, Java, HTML/CSS, JavaScript
**Developer Tools**: VS Code, PyCharm