

# Tianyu Gu (Joycelin)

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## Education

**Texas A&M University — College Station, TX**

Expected May 2023

*B.S. in Computer Science with Honors, Minor in Statistics* | **GPA: 3.9/4.0**

**Relevant Certificate:** Google Data Analytics Certificate, Data Structures and Algorithms, Software Engineering

## Skills

**Programming languages:** Python, Java, C/C++, JavaScript, HTML/CSS, SQL, R

**Tools:** Node.js, React, AWS, Kubernetes, Apache Spark, Docker, Tableau, Scikit-learn, Linux, TensorFlow, Flask

## Experience

**Software Engineering Intern — Oracle Corporation**

May 2021 – August 2021

- Deployed **machine learning** and **data mining** algorithms such as **Decision Tree**, **Apriori**, etc. on 100 million row databases and logs to search for anomalies, correlations, and errors
- Developed and validated models and workflow pipelines that track operations and predict system overloads using Oracle Cloud Autonomous Database AutoML
- Increased workstation efficiency by 22% by identifying redundant processes using **Anomaly Detection**
- Presented results to division's senior management and wrote documentation detailing data processes

**Undergraduate Researcher — Texas A&M University**

September 2020 - April 2021

- Conducted research for **Reinforcement Learning (RL)** toolkit (**RLCard**) that aims to push forward research of RL in domains with multiple agents, large state and action space, and sparse reward
- Created a rule model for card games by calculating the value of each card combination, which will generate data for use in supervised learning to develop a model player (**Deep-Q, TensorFlow**)

**Covid-19 Dashboard Developer — Texas A&M University**

October 2020 - January 2021

- Built backend pipeline for a Covid-19 dashboard that is used by Brazos Valley County officials and hospitals
- Created a **data processing** algorithm and real-time time series plot on local hospitalization data
- Developed an automated hospitalization and ICU usage **forecasting model** for hospitals to plan bed space and manpower accordingly (**NumPy, Scikit-learn, Pandas**)

## Projects

**Audio to Sign Language Converter (in progress)**

- Web application hosted on **AWS** that converts audio to American Sign Language (ASL)
- Utilizes **Google Cloud Speech-to-Text API** to translate speech to text, which is converted to ASL animation

**Depression Detection on Social Media**

- Predicts early signs of depression by analyzing over 10,000 Twitter and Facebook posts using multiple machine learning algorithms
- Naïve Bayes, Decision Tree, and KNN detect depressive tendencies with **93.12%, 89.37%, and 81.26%** accuracy respectively

**SwiftApply WebApp**

- Full stack application that helps students find recruiter information and send cold emails on a large scale
- Built using **React, Node.js, Firebase**, and SendGrid API

**Artis Finance (Hackathon)**

- Provides finance beginners with easy-to-read stock information to begin their investment journey
- Web-scraped real-time stock information from Yahoo Finance using Python library **BeautifulSoup** into JSON format, which is uploaded onto web app created using **Flask** and **React**