

# Tony Ding

ttdd1234@g.ucla.edu | (424)-371-0994 | linkedin.com/in/istonyding | tismine-git.github.io | github.com/TisMine-Git

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## EDUCATION

University of California, Los Angeles (UCLA) — *B.S. Computer Science*

*Expected – Jun. 2023*

Member of Upsilon Pi Epsilon (UPE) and Tau Beta Pi (TBP) @UCLA

GPA: 4.0/4.0      SAT: 1550/1600

## PROJECTS

### Music Recommendation System

*Apr. 2021 - Present*

Accomplished personalized music recommendation by using CF/CB recommendation algorithms and Machine Learning

- Performed pre-ranking using **Collaborative Filtering/Content Based** algorithm based on **MapReduce**
- Performed re-ranking using model based on **Logistic Regression**
- Constructed feature database using **Redis**
- Built recommendation engine using **Python Django**
- Performed distributed computing using **Spark on Hadoop cluster**

### Bring Fitness Center Online (Full Stack)

*Oct. 2020 - Dec. 2020*

Enabled gym users to keep track of real-time equipment availability and make workout plans/interact on the app.

- A **full stack web app** written in **JavaScript** using **Next.js** as framework and **MongoDB** as database.
- Achieved dynamic display of data and user search results by writing a **REST Api** to fetch data from server side

### GooberEats Delivery

*Jan. 2020 – Mar. 2020*

Finds the optimal route for delivery given a set of destinations by implementing A\*/Dijkstra's algorithm in **C++**

- Implemented a **HashMap data structure similar to C++ STL unordered\_map** that hashes street segments
- Return optimal route from start to destination using **A\*/DFS algorithms**
- Optimize the order of deliveries given a set of destinations by using **Simulated Annealing Algorithm**

### Website Development

*July. 2020 – Present*

Link: [tismine-git.github.io](https://tismine-git.github.io)

- Video background fixed upon scroll, Flip card and dynamic typing effects
- Interaction form to communicate

## SKILLS

Python • Java • C++ • MySQL • MongoDB • Next.js • JavaScript • HTML • CSS • React • Git

Scikit-learn • Hadoop • Spark • Yarn • HDFS • Linux • Docker • VMWare

**Relevant Courses:** Database systems, Software construction (C++, Java, Python, HTML/CSS, etc.), Data science, Probability statistics, Machine Learning, Artificial Intelligence, Algorithm and complexity, Operating system, Data structure and algorithm, Programming languages

## EXPERIENCES

### Sias University

*Jun. 2020 – Sept. 2020*

Campus debit card Consumption Analysis (Remote)

- Established real-time consumer/staff allocation model for 40k+ people on campus using **HCO algorithm**
- Built auditing and distributing model of grants and loans using **Support Vector Machine and Apriori algorithm**

### University of California, Los Angeles Graduate Division

*Oct. 2019 – Mar. 2020*

On campus Information Technology

- Routine and emergency server debugging and configuration for the entire UCLA graduate division
- Windows, Linux, and MacOS setup and configuration for faculties