

TONGSHU YANG

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Education

◆ **Georgia Institute of Technology, Atlanta, GA** **August 2019 - May 2022 (Expected)**

- Bachelor and Master Degree candidate in Computer Science, Intelligent-Information Network, GPA: 4.0 / 4.0, Top 1%
- Minor in Health & Medical Sciences
- Enrolled in the Honors Program, Living and Learning Community

Skills

Relevant Course: Data Struct & Algorithms, Machine Learning, Computer Organization & Program, Object Oriented Programming, Database Systems, Computer Systems & Networks, Objects and Design, Design & Analysis-Algorithms, Computing for Engineers, Applied Combinatorics, Statistic and Applications, Multivariable Calculus, Discrete Math

Programming: Java, Python, JavaFX, Matlab, C, MySQL, Swift, HTML

Languages: Chinese (Native Speaker), English (Proficient), Spanish(Elementary), Japanese (Elementary)

Other Skills: Mac Office, Microsoft Office, Presentation, Critical thinking, Collaborations, Flute, Drawing, Design

Projects

◆ **Kitchen Alchemy: A Responsive Web for Recognition Fruit and Vegetables with Nutrient Fact** **Summer 2020**

- Used python implements CNN model, MobileNet, with customized dense layer, accuracy could reach 87%
- Used Faster-RCNN for segmentation to improve user experiences and recognize objects in a more complex background
- Developed a website(Git) for user to upload images and display the top 3 results and their nutrient results

◆ **Sonification Lab : Automated Drive System** **Fall 2020 - Present**

- Developed the experiment for testing how different behavior of the auto drive system would influence user's trust level

◆ **Self-Designed Digital Farm Game: 4399 Farm** **Fall 2020**

- Used Java and JavaFX developed an interactive graphical game from scratch
- Implemented water, plant, harvest, inventory, market, pesticide, tractor and more functionalities for the game

◆ **Database Project: GT COVID-19 Testing System** **Fall 2020**

- Analyzed textual and graphical description and transfer into Entity Relationship Diagram
- Translated the diagram into relational schema and database schema and wrote procedure queries for system

◆ **Resonance: App for Sharing Music Based on Location** **Summer 2020 - Present**

- Develop an app that users could catch the music on their way and listen to the music on the app based on their position
- Using Swift to develop and design the user interface, setting up the app environment and services

◆ **Data Science Paper + Kaggle Computer Science Competition** **2018**

- Used Python for Data cleaning and different Data Analysis model to predict the survival rate on Titanic
- The highest accuracy is 83%, which was at Top 5% global-wide out of 10,000 participators at the time
- Wrote a paper for refining missing features, 'An iterative method of missing value imputation' (PDF)
- Paper mentions how to extract information, eliminate noise, and compare the efficiency between different methods

◆ **Vertically Integrated Projects: GaTech4Life, Multidisciplinary Group Project** **2019 - Present**

- Design gorilla feeder with random feeding time by using Arduino to improve gorilla's foraging ability
- Developing sensors for diagnosing health and athleticism of animals for reintroduction into the wild

Experience

◆ **Front End Web Development Internship at ApplyBoard, China** **December 2020 - Present**

◆ **Computer Science Teaching Assistance for Discrete Math, GA** **May 2020 - Present**

◆ **Physics Teaching Assistance for Modern Physics, GA** **Jan 2020 - May 2020**

◆ **Chinese Student and Scholars Association Outreach Business Department, GA** **Aug 2019 - Present**

◆ **Research Internship at Nexomics Biochemistry Company, NJ** **June 2018 - May 2019**

- Modified the amino acid in antigen-antibody binding site and discovered the elasticity of amino acid
- Using Nuclear Magnetic Resonance machine to analyze the structure, Gel electrophoresis for separating the segment
- Published a paper on this topic 'Characterizing Dynamics Allosteric Changes of Antibody-Antigen Interactions'
- Presented in the Practical Applications of NMR in Industry Conference (PANIC) in March 2019

◆ **Internship at Green Valley Pharmaceutical Co., Ltd. , Shanghai** **Summer 2017**

Hands-on experiences in Quality Control, learned about medicine producing, establish good relationship with colleagues

Reward

- Georgia Tech Faculty Honor for Fall 2020, Summer 2020, Spring 2020 and Fall 2019
- The Dr. Herbert B. Shearer Science Award, AP National Scholar with Distinction