

# ARNOLD WANG

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## EDUCATION

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### Georgia Institute of Technology

Atlanta, GA

BS Computer Science | GPA: 3.83 / 4.0

Expected Graduation May 2022

- Dean's List Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020
- *Relevant Coursework:* Machine Learning, Data Analysis and Visualization, Design and Analysis of Algorithms, Database Systems, Compiler Design, Systems and Networking
- Brother of Alpha Sigma Phi fraternity, Society of Asian Scientists and Engineers Finance Chair

## SKILLS

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**Languages and Frameworks** Java, Python, JavaScript, C, SQL; django, flask, React.js, D3.js, sci-kit learn, pandas, pytorch.

**Computer Science** Full stack web development, algorithm design, object-oriented programming, database design

**Data Science** Principle component analysis, ridge and lasso regression analysis, random forest decision trees

## EXPERIENCE

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### Georgia Institute of Technology

Atlanta, GA

Teaching Assistant for Design and Analysis of Algorithms

January 2020 - Current

- Provides out of lecture instruction to over 200 students in a course on algorithm design.
- Grades papers and provides logistical support to professor.

### Esri

Redlands, CA

Remote Software Development and Data Science Intern

June – August 2020

- Researched methods of detecting and providing automatic fixes of unclear digital cartographic feature data
- Applied unsupervised learning techniques as well as classical heuristics; 90+% suggestion viability on real-world data
- Used results to build a system that eliminates need for manual fixes; Saves 10 sec per error and hours per dataset
- Learned and applied SCRUM methodology of AGILE development; pushed commits Esri's Github codebase.
- Presented research results to product development teams within Esri's consulting and professional services branch.

## PROJECTS

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### Hurricane Early Detection

Late December 2020 - Current

- Use neural networks to provide augmented Dvorak technique classifications of tropical storms
- Built AWS S3 and EC2 based infrastructure to house, process, and prepare 2.2TB of NOAA data for experimentation

### Uber Traffic Analysis

October – December 2020

- Led a team of Georgia Tech students in performing ETA estimates using analysis of NYC Uber trip data.
- Used multi-dimensional clustering algorithms to assess the predicting power of non-Uber environmental factor datasets.
- Applied time-series forecasting libraries in discovering short-term and long-term trends over both single streets and entire street networks.

### Tiger Language Compiler

Atlanta, GA

- Built a compiler for the TIGER language in Java that optimizes code for the MIPS ISA.

February – April 2020

- Performs instruction translation, dead code elimination, constant propagation, register allocation, and scheduling

### Restaurant Recommendations

November – December 2019

- Performed analysis on restaurant review data using Apache Spark notebooks in order to determine the principle components of a restaurant experience.
- Provided recommendations through an API built with Python and a website written in ReactJS.

### Smart Fridge Camera

Shenzhen, China

- Contributed to the design and testing of a fridge camera shopping list assistant contracted by Walmart

June 2019

- Applied Microsoft Azure to pipeline video for use with machine learning food product recognition algorithms

- Increased image clarity by adding heated defogger ring around lens and modifying light sensor activation calculation