

# RYAN SONG

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## EDUCATION

### Carnegie Mellon University

Class of 2026

Majors: *Statistics & Machine Learning and Computer Science*

Dean's List High Honors

GPA: 3.85/4.0

Relevant Coursework:

- Data Structures and Algorithms, Fundamentals of Computer Science, Fundamentals of Imperative Programming, Introduction to Computer Systems
- Differential and Integral Calculus, Multivariate Calculus, Advanced Methods for Data Analysis

## WORK EXPERIENCE

### Goddard Space Flight Center, Greenbelt, MD

*"Developing a Machine-Learning Thermodynamic Phase Model" Intern*

Summer 2021

- Combine, screen, and inject various Satellite data into a Machine Learning Model, then generate matrices and plots to visualize model prediction

*Cloud-Aerosol Classification Intern*

Summer 2022

- Built basic-identification model using Calispo-ABI patch images with Convolutional Neural Network
- Work presented at American Geophysical Union and American Meteorological Society

### KTBYTE Computer Science Camps and Academy, Lexington, MA

Winter 2022-Present

Tutor

- Worked with students from across the globe on various app-related projects
- Provided 1 on 1 instruction to elementary-middle school students learning Java

## PROJECTS

### Bloons AR App

Swift

- Created an interactive projectile game using Apple's AR and Reality Kits
- Implemented entity physics and collision along with plane detection

### SQLite Database App

Kotlin

- Allows user to store username and email information locally, with options to view and edit their data
- Implemented features to create, delete, and update information in an Android SQLite database

### RainCheck App

Swift

- Utilized openweather API to retrieve and display weather conditions at the user's location or a searched location
- Made use of ParticleKit UI to compose visuals that synchronized with weather conditions

### Sudoku

Python

- Implemented features: Autosolver (with backtracking algorithm), user-created boards, and Hints
- Included user-friendly options such as keyboard-only and mouse-only modes

## SKILLS

**Computer:** Python, Java, Javascript, C, HTML & CSS, Swift

**Languages:** English (fluent), Chinese (fluent)

**Data Retrieval & Analysis:** R, matplotlib, numpy, sklearn, pandas