

SOPHIA CHEN

Applied Math | Computer Science | Design

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🎓 Education

2017-2021 **Brown University, Rhode Island**
Applied Math-Computer Science

GPA: 4.0

Relevant Coursework:

Accelerated Intro to CS

Discrete Structures & Probability

Crossing the Chasm with Design

Honors Multivariable Calculus

Linear Algebra

Principles of Economics

Fall 2018:

UI/UX

Intro to Systems

Statistical Inference

Applied Ordinary Diff Eq

2013-2017 **Fairview High School, Colorado**
Summa Cum Laude, IB Diploma

GPA: 4.9/5.0

⚙️ Skills

Languages

Java

Scala

HTML/CSS

Racket

C++

Ruby on Rails

Javascript

Computational Tools

R

Matlab

Design

Adobe Photoshop

Adobe Illustrator

LaTeX

👜 Experience

May 2018 - Aug 2018

Software Engineering Intern

Ruby on Rails | Javascript | HTML/CSS | InfluxDB

NCAR - EOL

Worked on production of CHORDS portal, a real-time data service platform for data acquisition, analysis, and distribution.

Designed REST API endpoints for JSON/GeoJSON data extraction.

Created visualization tools that aid in instrument monitoring and data processing.

Enhanced portal's performance for high volumes of data and users.

Aug 2015 - Aug 2017

Engineering & Data Science Intern

R | Matlab

NCAR - CISL

Designed statistical models and tools used to research relationships in the Earth sciences.

Optimized statistical analysis of geophysical data using high performance parallel computing.

Designed web apps for displaying atmospheric data.

Aug 2015 - May 2016

Assistant Teacher

Python

Summit Middle School

Instructed students learning basic to intermediate Python programming skills and strategies.

July 2015

Data Analytics Bootcamp

R

NCAR

Attended, and later, coached a camp to learn about big data analysis through real world applications.

Topics included spatial cluster analysis of atoms in solar cells and parallel computing using NCAR's supercomputer.

💻 Sample Projects and Publications

Guizilla

Built interactive GUI browser with HTML pages using Java, implementing both the client-side and server-side through sockets, reflection, JavaFX events, and XML file parsing.

Search

Built interactive search engine in Java that responded to user text queries and returned most relevant documents using the PageRank algorithm and term frequency.

Accelerating Data Analysis with Parallel Computing

Published technote on optimizing statistical analysis in R of large climate datasets with parallel computing on NCAR's supercomputer.

Ozone Concentration and Foliar Injury Analysis

Published technote on determining and modeling a correlation between ozone concentration and visible foliar injury from ozone.

👥 Memberships and Honors

NCWIT Aspirations in Computing Award Recipient

Award given to young women who have demonstrated achievement and passion in computing and technology.

Brown STEAM - cyberSTEAM and citySTEAM

Club that promotes the intersection of STEM and art.

citySTEAM explores networks of information.

cyberSTEAM focuses on applications of computer science in data visualization, music, etc.