

# David Du

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## Objective

To obtain an educational internship in the field of Computer Science in the fulfilment of Senior Experience for the academic year of 2020-2021

## Education

### Academy for Technology and Computer Science (ATCS)

2017 - Current

### Bergen County Academies (BCA) Hackensack, NJ

2017 - Current

GPA 3.984

## Work Experience

### Huaxia Chinese School Paramus, NJ

2019 - Current

- Taught competition math to middle schoolers
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### ACE Education Center Hackensack, NJ

2019

- Helped high schoolers master SAT Math concepts

## Related Courses

### Data Structures — 2020

Studied time and space complexity of algorithms and algorithmic complexity of Turing Machines, uncomputability, and the Halting Problem through the use of C++.

### Mathematical Foundations of Computer Science — 2020

Formalised the notions of algorithms through mathematics, including proving the validity of algorithms and formal logic

### Functional Programming— 2020

Programmed in Scheme to understand the basics of functional programming and lambda calculus.

### Analytical Calculus— 2020

Formulated the fundamentals of calculus through proof and rigor and began solving differential equations

### AP Computer Science — 2019

Studied the development of data structures through logic and formal methods while studying the AP Computer Science Curriculum through the use of Java.

### Artificial Intelligence — 2019

Utilised Python in order to study the basics of artificial intelligence, including heuristic searching and minimax algorithms.

## Computer Skills

### Programming Languages

- C++, Java Python, Scheme

### Markup Languages

- HTML, CSS,  $\text{\LaTeX}$

### Graphics

- Adobe Photoshop

## Community Service

### Joe Holbrook Math Competition

Volunteer Leader

2019 - Current

### Bergen Chinese School

Teacher Assistant

2018

### Bergen County Academies Open House

Volunteer

2018-Current

## Honors & Awards

- USACO Silver
- AIME Qualifier
- Bronze at the World Math Team Championship (WMTCC)
- Canadian Open Mathematics Challenge: Performance with Distinction
- National AP Scholar
- High Honors: John Hopkins International Talent Search
- Completed ABRSM Series of Exams

## Extracurricular Activities

- President: Science Olympiad
- Junior Captain: Physics Team
- Vice President: Key Club
- Member: Math Team
- Member: Nation Honor Society
- Member: National Chinese Honor Society
- Attendant: Columbia Science Honors Program

## Foreign Languages

- Chinese — Fluent