



Brahm Capoor



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brahmcapoor

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## SKILLS

**LANGUAGES:** Python, Ruby, HTML/CSS, Javascript, Java, C++, C, x86 Assembly  
**FRAMEWORKS:** React Native + Redux, Tensorflow, SciPy stack, Django, Ruby on Rails  
**OTHER:** Public Speaking, Leadership, Creative & Expository Writing, Teaching

## EDUCATION

### Stanford University, Class of 2019

*Major:* Symbolic Systems with a concentration in Artificial Intelligence  
*GPA:* 3.85

Relevant courses & work:

- MATH 51: Linear Algebra & Multivariable Calculus
- PSYCH 50: Introduction to Cognitive Neuroscience
- CS 106A: Programming Methodologies (Java)
- CS 106B: Programming Abstractions (C++)
- CS 107: Computer Organization and Systems
- CS 103: Mathematical Foundations of Computer Science
- CS 124: From Languages to Information (Natural Language Processing)
- CS 109: Intro to Probability for Computer Scientists
- CS 51: CS + Social Good Studio
- CS 227b: General Game Playing
- LINGUIST 130b: Introduction to Lexical Semantics
- ECON 45: Using Big Data for Social and Economic Problems
- CS 221: Artificial Intelligence
- CS 229: Machine Learning
- CS 224N: Deep Learning for Natural Language Processing (Currently Enrolled)

### United World College of South East Asia, Class of 2015

Graduated with 42/45 points in the International Baccalaureate with 7/7 in an additional Further Mathematics course and A\*s in all 10 of the IGCSEs I took

## HONOURS

- High school awards for Physics, Mathematics, Literature, Overall effort and achievement in academics and public speaking
- Nominated for the Boothe Prize for excellence in academic writing in freshmen year for a linguistics paper I wrote about buzzwords

## EXPERIENCE

### CloudMinds Technologies

Natural Language Processing Intern

Working on signal processing for speech recognition, deep learning for language understanding and designing and building a backend system to integrate various TensorFlow models with data collection pipelines.

### Department of Computer Science

CS106 Section Leader

TA (Teaching Assistant) for Stanford's introductory Computer Science 2-course sequence. Teach a section of 10-12 students, grade homework and exams, hold office hours and interactive grading sessions for students. Courses are in Java and C++. Have given multiple guest lectures and written new assignments for the class, alongside autograders for these assignments. Also helping to train new TAs.

### Human-Computer Interaction Group

Research Intern

Worked on the HabitLab Google Chrome Extension (<https://github.com/habitlab/habitlab-chrome>), which intelligently offers interventions to increase one's productivity on the web.

### Center for Cognitive Neuroscience, Duke-NUS Medical School

Research Summer Intern

Assisted with two psychophysics experiments in the Brain & Consciousness Lab. Designed, implemented and tested both experiments (using python and the psychopy package), and ran one of the experiments on test subjects, followed by subsequent data analysis. Both experiments are on my github.

### European Center for Nuclear Research (CERN)

High School Summer Intern

Part of a team of summer students & engineers helping to build and test resistive plate chambers (RPCs), a type of particle detector in the Compact Muon Solenoid (CMS) experiment, a part of the Large Hadron Collider (LHC).

## PROJECTS

### L.A.I.R: Leveraging A.I. for Requests (<https://github.com/brahmcapoor/L.A.I.R.>) (python)

Final Project for Stanford's CS229: Introduction to Machine Learning. Used various Machine Learning Algorithms to predict how long students would need to wait for help at office hours and subsequently, how long it would take a TA to help them.

### Heroes and Villains: What A.I. can tell us about Movies. (<https://github.com/brahmcapoor/L.A.I.R.>) (python)

Final Project for Stanford's CS221: Artificial Intelligence Techniques and Principles. Used various Artificial Intelligence Techniques on Movie Scripts to identify protagonists and antagonists, find factions of characters, and cluster scripts based on their archetype.

### BlueBook (Java)

Application written with Stanford Lecturers Chris Gregg and Chris Piech to allow students to do Computer Science exams on their laptops. Helping design, test and build both the frontend (student facing) and backend (grading infrastructure) for the program. Currently a research project in progress.

### Mercury (<https://github.com/brahmcapoor/Mercury>) (python)

A twitter bot that chooses a random emotion every day and generates tweets based on that mood using Markov Chaining on a corpus of around 2000 quotes per emotion, webscraped from GoodReads.

### Cellular-automata (<https://github.com/brahmcapoor/cellular-automata>) (python)

A cellular automata simulator written using the matplotlib and numpy packages. Accepts any of the automaton rules from Wolfram's Atlas.

### Heap Allocator (C)

Dynamic memory allocator written in C. Utilises doubly-linked segregated free list with coalescing. Outperformed benchmark for throughput by 15% and utilisation by 5%.

## ACTIVITIES

### Debating

Stanford Debate Society

High School debate team member & captain

Captained the most successful debate team in my school's history

### High School Math Competition Team

Highest performer in school history

### Writing & Journalism

High school newspaper journalist & chief editor

High school science magazine journalist & chief editor

2008 - Present

2015 - Present

2011 - 2015

2008 - 2015

2013 - 2015

2013 - 2015