

# Sahil Bansal

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## EDUCATION

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**Brown University**, *B.S. Computer Science*, 4.0/4.0 GPA Expected Graduation May 2023

- Relevant Courses: Functional and Object-Oriented Programming, Algorithms and Data Structures, Computer Systems, Software Engineering, Deep Learning, Computer Vision, Financial Accounting, Macroeconomics

**British International School of Jeddah**, *International Baccalaureate*, 42/45 Class of 2019

## WORK EXPERIENCE

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**Brown University**, *Undergraduate Teaching Assistant* January 2021 – Present

- For CSCI0170: Introductory Computer Science, hosted workshops to help students debug their code, and to explain concepts such as functional programming, recursion, and big-O analysis. Also, enhanced course documentation and graded homework and projects.
- For CSCI0330: Introduction to Computer Systems, helped students debug code and explained concepts such as memory management, concurrent programming, and network programming.

**Infotopia**, *Co-Tech Lead* June 2021 – August 2021

- Worked in the startup in a group of three to develop a model using machine learning and deep learning techniques to detect misinformation in the public health sector
- Coded a browser extension that used the model to detect misinformation in articles

## PROJECTS

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**Ultimate Tic Tac Toe** | Java, React, CSS, Heroku May 2021

- Worked in a team of 4 to design and implement a website to play Ultimate Tic Tac Toe (Link to Website: <https://utttapp.herokuapp.com/>)
- Used websockets to allow clients to communicate in real time using the server as an intermediary

**GANime** | Python, Tensorflow, Google Cloud Platform May 2021

- Implemented and compared three different General Adversarial Networks (Deep Convolutional, Least Squares, Wasserstein) to generate the best anime faces

**Maps** | Java, SQL, ReactJS, CSS September 2021 - April 2021

- Programmed a primitive version of Google Maps from scratch
- Collaborated with two colleagues to design and implement that allows for easy maintenance and easy replacement of algorithms

**Database** | C November 2020

- Used multithreaded and network programming to create a thread-safe server that allows multiple clients to connect and simultaneously edit a database

**Shell** | C October 2020

- Wrote a version of Shell that has capabilities for built-in commands like cd, ln, rm, and exit, run programs by forking off child processes, and redirecting files
- Implemented job control, which allowed the movement of jobs between the foreground and background, and appropriately handling signals

**Search** | Scala, XML March 2020

- Built an implementation of Google Search that used Term Frequency - Inverse Document Frequency and PageRank algorithm to produce the best results for a search query

## SKILLS

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**Programming Languages:** Java, Python, C, Scala, Racket, ReasonML, SQL (Beginner), HTML (Beginner), CSS (Beginner), JavaScript, (Beginner), ReactJS (Beginner), Assembly x86-64

**Tools:** Git, GDB, Google Cloud Platform, Tensorflow

**Additional Experiences:** Network Programming, Multithread Programming, Pair Programming, Peer Review, Unit Testing, Basic Spanish, Conversational Hindi

## AWARDS

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- British International School of Jeddah Scholarship, 2017-2019
  - Duke of Edinburgh Bronze, Silver and Gold Awards, 2016-2018
  - Cambridge IGCSE International Mathematics Highest Mark in Saudi Arabia, 2017
  - Cambridge IGCSE Computer Science Highest Mark in Western Province, Saudi Arabia, 2017