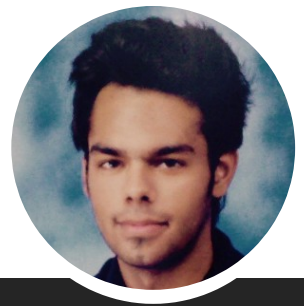# SANCHIT BATRA

📅 11/19/1997
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🔗 https://sanchitcop19.github.io

EDUCATION

Computer Science | Music   08/2016 – 05/2020
University at Buffalo, NY

GPA: 4.0/4.0

WORK EXPERIENCE

Research Aide | Developer   05/2019 – present
Dept. of Computer Science, University at Buffalo, NY

- Leading the design and implementation of an ethical routing project for ~280 students
- Designed the algorithm for and implemented an efficient routing simulator, causing a 70% improvement in runtime (*Python*)

Teaching Assistant   08/2017 – present
Dept. of Computer Science, University at Buffalo, NY

>>> *Algorithms*
- Developed the template and auto-grading code for an NP-Complete reduction programming assignment (*Python, C++, Java*)
- Appointed as the Piazza lead, brought the response time down to 6 min
- Provided comprehensive (97%) test coverage (*PyTest*) and generated graph testcases
- Fixed existing bugs in the auto-grading software

>>> *Data Structures*
- Conducted recitations and office hours, helped manage the course Piazza page and provided debugging support (*C++*)

>>> *How The Internet Works*
- Supported recitations, mentored students and provided debugging support (*JavaScript, SQL*)

Research Assistant   04/2018 – 04/2019
Motion Simulation Lab, University at Buffalo, NY

- Constructed a virtual model for autonomous vehicle research, and led the creation of an environment for training drivers (*Unity3D, C#*)
- Produced heightmaps by encoding elevation data in PNG files (*Python, Google Elevation API*)

Mathematics Tutor   09/2017 – present
Math Place, University at Buffalo, NY

AWARDS

- #3 on the UB ACM leaderboard for AoC'18
- 2018 Grace W. Capen Award recipient
- Top student contributor for the Piazza pages of 10 Computer Science courses
- Top 250 out of 42000 scholars at the WSC Tournament of Champions hosted at Yale
- #1 @ Wired, #2 @ Cord 'n Blend, #4 @ Buffalo Untapped

PROJECTS

babel-ar   02/2019
* Winner @ BrickHacks *

- ASL/Speech to text translator for AR smart glasses
- Won the Best Use of 5G Currencies in Immersive Media award, sponsored by Verizon

spotify-tools   07/2019

- Designed and developed a web app with functionality for playlist creation using all songs by an artist, or songs of a specific tempo or key with the intention of spicing practice routines up
- Currently working on chord and timbre analysis

ub-lost-and-found   12/2016
* 3k views (Google Search Console) | 72.5% success *

- Developed the back-end for a website to facilitate easy broadcasting of lost items

roseate-engineering   07/2019
* 23% revenue bump *

- Constructed a website for an electrical consultant
- Orchestrating the development of a price-list retrieval software intended to increase efficiency

the-unbored   06/2019

- Built a recommender system for the Bored API based on user personalities extracted from tweets

ubhacking   05/2017

- Aided in the construction of the FAQ admin panel and auth. pages for the UBHacking website

math-place-scheduler   04/2019

- Engineering a web app to replace the current means of exchanging shifts in the Math Place

Interpreter

- Developed an interpreter for a simple functional language supporting variables, functions, local/global scoping, arithmetic, relational operators and string operations with basic error handling

SKILLS

Technical

Python | Flask | PyTest
C | C++
Java | Bootstrap
Bash | Unix | Git VCS
Markdown | LaTeX
HTML | CSS
JS | PHP | SQL
AWS | GCP | Docker
Unity3D | C#