Sanchit Batra

https://sanchitcop19.github.io
sanchitb@buffalo.edu
(716) 418-6482
https://github.com/sanchitcop19

EDUCATION

Computer Science | Music (m) 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

- Led the design of the auto-grading code for an ethical routing project for **~280** students, funded by the Mozilla Foundation (among others) for the Responsible Computer Science Challenge [***Python***]
- Designed and implemented an efficient routing simulator, leading to a **40%** improvement in runtime

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

>>> Algorithms
- Developed the autograder for an NP-Complete reduction coding assignment [***Python*** **|** ***C++*** **|** ***Java***]
- Appointed as the Piazza (online discussion forum) lead, brought the response time down to **6 min**
- Provided comprehensive (**97%**) test coverage [***PyTest***]
- Fixed existing bugs in the auto-grading software

>>> Data Structures
- Conducted recitations and office hours, supported the course Piazza 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

- Helped construct a virtual model for autonomous vehicle research, and led the creation of an environment for training drivers [***Unity3D*** **|** ***C#***]
- Generated heightmaps by encoding elevation data in PNG files [***Python***]

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

AWARDS

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

PROJECTS

project-casa 09/2019
* 2x Winner @ BigRedHacks'19 *

- Ranked **1st** and **2nd** (sponsors: **WayFair, IBM**) among **67** projects at **Cornell University**'s hackathon
- Processed user-submitted house addresses (**Geocoding API**) and recommended nearby houses (**Distance Matrix API**) that are less susceptible to natural disasters [***Python*** **|** ***Flask***]
- Set up and deployed the server on **IBM Cloud Foundry**
- Designed and implemented a minimalist UI for the web application [***HTML*** **|** ***CSS***]

babel-ar 02/2019
* Winner @ BrickHack'19 *

- Won the **Best Use of 5G Currencies in Immersive Media** award (sponsor: **Verizon**) at **RIT**'s hackathon
- Created an ASL-text translator for AR glasses [***Python***]
- Leveraged scikit-learn to process video frames received from the glasses and generate the corresponding text

spotify-sharp 07/2019

- Designed and developed a web app for playlist creation using all songs by an artist, or songs of a specific tempo [***Python*** **|** ***Flask*** **|** ***JavaScript*** **|** ***jQuery*** **|** ***Redis***]
- Leveraged caching to speed up average response time from an order of **minutes** to **seconds**
- Used the **OAuth2.0** security model for authentication

ub-lost-and-found 12/2016

- Developed a web application to facilitate easy broadcasting and subsequent retrieval of lost items [***PHP*** **|** ***SQL*** **|** ***HTML*** **|** ***CSS*** **|** ***JavaScript*** **|** ***Bootstrap***]
- **~3300** total impressions (Google Search Console)
- **82** out of **272** lost items successfully recovered till date

roseate-engineering 07/2019

- Constructed a website for an electrical consultant [***Python*** **|** ***Flask*** **|** ***HTML*** **|** ***CSS*** **|** ***Bootstrap***]
- **4.2%** click-through rate till date (Google Search Console)

the-unbored 06/2019

- Built a recommender system for the Bored API based on user traits extracted from tweets [***Python*** **|** ***GraphQL***]
- Improved accuracy by implementing a scoring system for quantifying user personalities

TECHNICAL SKILLS

Proficient: *Python* | *Flask* | *PyTest* | *Bootstrap* | *git* | *REST APIs*
Intermediate: *C++* | *Java* | *C* | *JavaScript* | *HTML* | *CSS* | *Unix*
Familiar: *Bash* | *C#* | *SQL* | *jQuery* | *AWS* | *GCP* | *Docker*