Sanchit Batra

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EDUCATION

Computer Science | Music (m)   05/2020
University at Buffalo, NY

GPA: **4.0/4.0**

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 | Heroku*

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

- Supported the construction of a virtual model for autonomous vehicle research [*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 **10** course Piazzas
- 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

hypertension-tracking-network   09/2019
* Finalist @ MedHacks'19 *

- Ranked in the top 3 teams (track: **Global Management of Chronic Disease**) at **Johns Hopkins'** hackathon
- Conceived a web application to assist NGOs in targeting resources towards locations where hypertension is highly prevalent [*Python, Flask, HTML, CSS, JavaScript*]
- Processed POST requests containing blood pressure data and populated a map with the collected information using overlays to display possible clusters

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 the 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   07/2017

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

the-unbored

- Built a recommender system for the Bored API based on user traits extracted from tweets [*Python | GraphQL*]