

SIDHARTHA AGRAWAL

U.S. Permanent Resident (Green Card)

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[agrawa96-sid.github.io](https://github.com/agrawa96-sid) | [in](#) [sidhartha-agrawal-purdue](#) | [agrawa96-sid](#)

EDUCATION

- Purdue University-West Lafayette, Indiana, U.S.A. | Year: Junior** Aug '18 - May '22
B.S. in **Computer Science** with minor in **Mathematics** GPA: **3.74 / 4.0**
Certificate in **Entrepreneurship and Innovation**
Dean's list **4 semesters**

HARD SKILLS: **C++** (Advance), **MySQL** (Intermediate), **Java** (Advance), **C** (Advance), **Python** (Advance), **HTML** (Intermediate), **BASH** (Intermediate), **R** (Intermediate), **JavaScript** (Intermediate)

SOFT SKILLS: Strong Work Ethics, Positive Attitude, Time Management Ability, Good Communication Skills, Quick Problem-Solving, Quick learner

COURSEWORK: Analysis of Algorithms*, Data Mining and ML*, Systems Programming, Computer Architecture, Programming In C, Foundations Of CS, O-O Programming, Introduction to Probability*, Introduction To Statistics

WORK EXPERIENCE

- Undergraduate Research Assistant | Purdue University | Virtual (COVID-19 Pandemic)** May '20 - Present
-Worked under the mentorship of **Prof. Berkay Celik** on a **Sandia backed project** that aims to develop tools to **generate realistic** network traffic and system events for Cyber Experimentation within Minimega VM(s)
- Undergraduate Teaching Assistant | Purdue University | Virtual (COVID-19 Pandemic)** June '20 - Present
-Guided students taking CS252 (Systems Programming) course at Purdue by providing in-lab assistance
-Held office hours and monitored the online forum **Piazza** to address doubts and help with **debugging**
- Teacher | Purdue Undergraduate Student Board | West Lafayette, Indiana** May '19 - Present
-Tutored freshmen and sophomore students majoring in Computer Science with their coursework
-Improved their understanding of concepts by guiding them to solve **LeetCode** coding problems

INDEPENDENT PROJECTS

- SETGen - System Events and Traffic Generator** May '20 – Aug '20
-An all-in-one tool using **Python** and **BASH scripting** that automates Minimega VM creation, generates both Intra-VM and Inter-VM network traffic, and generates system events
-Wrote multiple scripts and **modeled** them to **emulate realistic user behavior** using tools like **Selenium, Wireshark, D-ITG**
- GETweb** Apr '20
-A **multi-threaded HTTPS server** using **C++** that services **GET requests** and maintains server log
-Integrated features like handling **CGI requests** and **web-browsable directories** with sorting options
- MeSHELL** Mar '20
-An Unix shell using **C++** that uses **Bison Grammar** to interpret the CLI input and service the requests with features like **wildcarding** and **subshell**
-Integrated a text-editor using **C** to browse through **historical** commands and **edit** the CLI request
- MemALC** Jan '20
-A **DLMalloc** inspired memory manager using **C** that allocates and deallocates memory similar to **malloc()** and **free()** in C
- SoRTViZ** Dec '19
-A simple visualizer using **JavaScript** for six familiar sorting algorithms
-Combined features like controlling speed and counter for number of swaps

LEADERSHIP ACTIVITIES

- School Publication Captain | Kendriya Vidyalaya | Kathmandu, Nepal** Apr '17 - Apr '18
-Led the School Publication Club and had discussions with members aiming to increase school magazine readers
-Implemented a new idea of publishing quarterly e-Newsletters that resulted in **8%** audience growth

VOLUNTEERING

- Volunteer | Shree Panchkanya Basic School | Kathmandu, Nepal** Dec '18 - Jan '19
-Volunteered as a part time teacher to teach Mathematics and Computer Science to the students from grade 9
-Created a student database using **C** with **AWS S3** cloud support for the school