SIDHARTHA AGRAWAL
U.S. Permanent Resident
(Green Card)

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EDUCATION

PURDUE UNIVERSITY
W. Lafayette, Indiana, U.S.A

B.S. in **Computer Science**
(Concentration in Machine Intelligence & Computer Graphics and Visualization)
Minor in **Mathematics**
Certificate in **Entrepreneurship and Innovation**

Expected Graduation: **Dec 2021**
Cumulative GPA: **3.74 / 4.0**
Dean's list/Semester Honors: **4 semesters**

HARD SKILLS

- C++ ● ● ● ● ●
- MySQL ● ● ● ● ●
- Java ● ● ● ● ●
- C ● ● ● ● ●
- Python ● ● ● ● ●
- HTML ● ● ● ● ●
- BASH ● ● ● ● ●
- R ● ● ● ● ●
- JavaScript ● ● ● ● ●

SOFT SKILLS

- Strong work ethics
- Positive attitude
- Time management ability
- Good communication skills
- Quick problem-solving
- Quick learner

COURSEWORK

CS381: Analysis of Algorithms*
CS373: Data Mining and ML*
CS252: Systems Programming
CS250: Computer Architecture
CS240: Programming In C
CS182: Foundations Of CS
CS180: O-O Programming
STAT416: Intro to Probability
STAT350: Intro To Statistics
In Progress

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
- Assisted 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   *W. 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

SUPPLY CHAIN MANAGEMENT ● ENTEK INT'L   *Kathmandu, Nepal*
May '15 – Dec '15
- Managed supply chain for the store, and catalogued inventory, on their database, worth $5000 daily
- Increased sales by **5.2% in 6 months** by studying the flaws in their customer support and improving them with time

PROJECTS

SETGen - SYSTEM EVENTS AND TRAFFIC GENERATOR
An all-in-one tool using **Python** and **BASH scripting** that **automates Minimega VM creation**, **generates** both **Intra-VM** and **Inter-VM network traffic**, generates **system events**, etc. Wrote multiple scripts and **modeled** them to **emulate realistic user behavior** using tools like **Selenium, Wireshark, D-ITG,** etc.

GETweb
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
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
A **DLMalloc** inspired memory manager using **C** that allocates and deallocates memory similar to malloc() and free() in C.

SoRTViZ
A simple visualizer using **JavaScript** for six familiar sorting algorithms like Bubble Sort, Insertion Sort, Selection Sort, etc. Combined features like controlling speed and counter for swaps.

LEADERSHIP

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