Simran Arora

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EDUCATION

New York University, Graduate School of Arts and Science, New York, NY   **August 2019-May 2021**
- Master's of Science in Computer Science   **GPA: 3.73**
  Courses: Algorithms, Programming Language, Big Data, Operating Systems, Info-Tech Project, Databases

Guru Gobind Singh Indraprastha University, New Delhi, India   **August 2014-May 2018**
- Bachelor of Technology in Information Technology   **CGPA: 8/10**
  Courses: Algorithms, Data Structures, Web Technologies, Software Engineering, Artificial Intelligence

SKILLS

Languages:	Python, C++, Java, AngularJS, React, NodeJS, HTML, CSS, Javascript, SQL
Tools and Frameworks:	Flask, Git, Hadoop, Hive, Impala, Pig, Scala, Spark, Rabbit MQ, Scrum, Agile, Docker, Kubernetes
Hardware:	Raspberry Pi3, ESP8266, Bluetooth(HC-05), Ultrasonic (HC-SR04), Motor drivers(l293d), ATmega8
Operating System:	Windows, Linux, macOS

WORK EXPERIENCE

Girls Who Code, New York, United States | Summer Immersion Program Instructor   **June 2020-August 2020**
- Provided active instructions on HTML, CSS, and Javascript to almost 150 students during two months along with building a culture of Sisterhood in the classroom
- Trained students in website development life cycle to design and implement an Activist Toolkit website
- Led and managed student sponsor partner interactions with P&G, Travelers, and Moody's

NTCS Corporation Pte. Ltd., Noida, India | Web Development and IoT Intern   **February 2017-August 2017**
- Collaborated with the hardware team to implement handshaking APIs in C++ and Java for Smart Parking devices
- Designed a frontend dashboard in AngularJS, NodeJs, and Javascript for parking monitoring, data analysis, and real-time monitoring of smart devices deployed on street
- Implemented a device provisioning backend service in Java that reduced device provisioning time by 95%
- Co-Authored the patent (A Holistic Parking System & Method For Vehicles Application No: 201811006748)

PROJECTS

Trading bot - Reinforcement Learning, CITI | *Machine Learning, Python, Open AI GYM* | Link
- Led research and development of financial trading bots on CITI's historical market data
- Designed an Open AI GYM based trading environment in Python that enabled training on multiple commodities, different trading strategies, and a reward system based on PnL
- Implemented reinforcement learning trading bots using stable baselines algorithms(PPO2, TD3) in Python and designed the first bot to trade and make a monthly profit of 20%
- Improved the existing trading infrastructure by enabling custom logging along with Tensorboard for metric evaluation that unblocked teams at CITI to adapt quickly to the system

From a Concrete Jungle to a Concrete Farm, Realtime Big Data Analytics | *Hadoop, Map-Reduce, Impala, Python* | Link
- Collaborated with a team on a Big Data project to predict the distribution of vertical farms across New York City
- Implemented a Big Data cleaning, profiling, and preprocessing pipeline using Hadoop Map-Reduce and Impala
- Performed in-depth data analysis in Python to develop a suitability score metric along with data visualizations using ArcGIS that indicated the region-wise distribution of vertical farms
- The predicted distributions matched the Supermarket Needs Index(SNI) with 94.28% accuracy

Smart Home Automation and Intrusion Detection | *Debian OS, Python, RaspberryPi3, MQTT Protocol* | Link
- Conceptualized an IoT project from scratch using RaspberryPi 3, Wifi and Bluetooth modules to operate traditional wall switch remotely using a Flask Website
- Integrated real-time intrusion updates using MQTT Broker in Java. The prototype developed has a lifespan of 3 to 4 years surviving on a coin cell battery and costing less than 50 USD