# Nirmal Sarswat

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## **EDUCATION**

#### **IIT ROORKEE**

B.TECH. IN ELECTRICAL
ENGINEERING
Expected May 2020 | Roorkee, IN
Cum. GPA: 7.7/10

#### TECHNICAL SKILLS

#### **PROGRAMMING LANGUAGES**

Over 5000 lines:
Java • C++ • Python
Over 1000 lines:
JavaScript • C# • PHP • Shell
Familiar:
Dart • Nodejs

## DESIGNING SKILLS

HTML • CSS • XML • Adobe PhotoShop

## **INTERNSHIPS**

#### **SHOPCLUES** | Software Engineering and Data Science Intern

Dec 2017 – Jan 2018 | Gurgaon, IN Apache solr | Python | Hadoop | Shell

- Shopclues is a leading e-commerce website in India. We were the team of three members improved search algorithm with implementing extra feature, merchant score, using machine learning algorithms with advanced cache system of solr search
- We implemented a m \* n probabilistic search over unsupervised data with making clusters, implemented a simple match-to-match algorithm for making cluster of same type merchants for finding a product easily
- We improved data processing modules using structured algorithms, for nodes in distributed servers with the help of Apache Zookeeper

#### MARWADISHAADI | SOFTWARE ENGINEERING INTERN

May 2017 - Aug 2017 | Bombay, IN

Apache server | python | Java | shell | MySQL | PHP | Firebase

- MarwadiShaadi is a match-making web and mobile based start-up. We were the team of five people and we made there mobile applications from scratch
- Created and code Android modules from scratch, written back end in flask(python) and used MySQL database with optimized queries
- Integrated load balancer for the servers, written auto testing modules and created specific in bound and out bound rules of the firewall on the servers

#### **KWOC** | OPEN SOURCE MENTOR

Nov 2017 – Jan 2018 | Remote, IN Java | Python | Scrapy | Git

- KWoC is 'kharagpur winter of code' which is more likely to the Google Summer of Code. IIT KGP organize this every year, around 1000+ student get selected for the open source projects. I was a mentor in this and having 20+ mentee on 2 projects
- One project was to make crawlers for most popular search engines (Google, Yahoo, Bing and more) and popular websites (YouTube, Quora, Stackoverflow and more). Another was to make Android mobile more secure (one kind of anti-virus) in manner of privacy of data, malicious attacks, and local data sharing
- I code the initial modules of Android Application and made proxy based crawlers. Mentees work was to learn how to fix issues, add features, feel the open source power, importance of attending summits and know the open source world more deeply

## **PROJECTS**

#### HAND WRITTEN RECOGNITION | ARIES, IIT ROORKEE

AUG 2017 - Present | Roorkee, IN

Machine Learning | Deep Learning | Python | MySQL | Image Processing | Android | OpenCV

- ARIES, IITR is the group of people who are loving Artificial Intelligence on hardware as well as software
- Our project team consist six member and one mentor. We are creating Application which will read human written sentence and make a PDF version of it
- My contribution on the project is implementing R-CNN with using image processing techniques for preprocessing of images using Open-CV

#### MARTIAN HARMONY | MARS, IIT ROORKEE

Jan 2017 - March 2017 | Roorkee, IN

Arduino | Python | Image Processing | Assembly | Objective C

- Mars, ITR is the group of people who are passionate of build robotic models for making our life simple with their tech
- Our project team consist five member and one mentor. We created a set of robots that were a band in a group, consists Drum, Piano, Guitar, Flute, and simple EDM
- Being a part of this project, I was helping in designing models of the robots, written image processing code for piano and written the hardware connectivity modules such as voltage management, assembly code, hardware level language debugging

### POSITION OF RESPONSIBILITY

#### **AEVA | NETWORK ARCHITECTURE AND SECURITY HEAD**

Oct 2017 - Present | Roorkee, IN

Assembly | MQTT | Python | MySQL | Shell

- Aeva is a home automation based start-up. First, I was the trainee in there start-up, after my work on MQTT brokers, system management skills, hardware protocol handling and setting up distributed systems, they decides to give responsibility of this work and manage it with the new employees in there start-up
- My work was to setup linux servers on cloud. Setup mqtt brokers with high efficient pings and use external load balancer for the protocol handling, and making a distributed servers chain with fast data ping from/to nodes
- Created all network modules from scratch

## EXTRA-CURRICULAR

- 2017 Won Shopclues Spark (Hackathon) among 40 teams, and shortlisted among 200+ teams
- 2017 Profile contains 1 silver and 3 bronze on Hacker Rank, handle nirmalsarswat401
- 2017 Member of Artificial Intelligence and Electronic Section, IIT Roorkee with project maintainer position
- 2016 Secured rank in top 0.197% students in JEE Mains exam, among 1.5 Million students, conducted by CBSE
- 2016 Stood amongst top 1.2% students in the Joint Entrance Examination, conducted by Indian Institute of Technology