Saurabh Kumar Singh

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Objective

To pursue an internship in the field of **Machine Learning, Deep Learning, Big Data, Computer Vision and Android Development** (preferably industry).

Education

B.Tech Computer Science and Engineering, IIIT Naya Raipur, SGPA- 7.65/10   (expected Summer 2020)

UP-Board (CLASS XII), Dhata Inter College, Dhata-Fatehpur, Uttar Pradesh 95.6%   (May 2015)

UP-Board (CLASS X), Ch.P.S.High School, Dhata-Fatehpur, Uttar Pradesh 89.6%   (May 2013)

Internship

National Health Mission (Health Department Chhattisgarh)

- Android Developer Intern *(Sep 2018 - Jan 2019)*
- Developed a Health awareness Android App "Hamar Swasthya" to the Health Department of Chhattisgarh

Academic Projects

Multi-Label Classification on Street Fashion Dataset (Modanet)   *(Jan 2019-Ongoing)*

- The Dataset provides multiple polygon annotations for each image, where each polygon is associated with 13 meta fashion categories. We aim to produce semantic segmentation and object detection results as mentioned in the original paper using both Deep Learning and Machine Learning techniques. Our objective is to also learn the best evaluation metric for the task.
- Team: Kushashwa Ravi Shrimali and Krutika Bapat
- Minor Project under Dr. Vivek Tiwari, CSE Dept. (Asst. Prof, IIIT NR)

Video-Stabilization Using Point Feature Matching in OpenCV   *(Feb 2019-Ongoing)*

- This mainly involves reducing the effect of motion due to translation or rotation or any movement in the camera. In this, the Euclidean Motion Model is used instead of Affine or Homographic transformation, because it is adequate for motion stabilization.
- Course Project under Dr. Santosh Kumar, CSE Dept. (Asst. Prof, IIIT NR)

Query Based Image Synthesis Using GANs   *(Aug 2018-Dec 2018)*

- Worked on enhancing current techniques for Text to Image Synthesis, comparison & evaluation of existing models. Team: Kushashwa Ravi Shrimali and Krutika Bapat
- Minor Project under Dr. Vivek Tiwari, CSE Dept. (Asst. Prof, IIIT NR)

Android App for Computer Vision application on Images(openCV in Android)   *(Aug 2018-Jan 2019)*

- Working on OpenSource Computer vision applications(Facial recognition, Gesture recognition, Segmentation etc) on Images. This was a self-learning project, **Project** Link Here

College Admission Query ChatBot   *(Aug 2018-Dec 2018)*

- Worked on a project for the institute, Uses rivescript and NodeJS to answer the admission related Queries.
- Client: Sr. Network Engineer, IIIT NR
- Course Project under Dr. Ankit Choudhary, CSE Dept. (Asst. Prof, IIIT NR), **Project** Link Here

VLSI-Implementation of Deep Neural Networks Using Stochastic Computing   *(Jan 2018-May 2018)*

- Implemented a Neuron using ASIC Design, Team of 11 Members
- Course Project under Dr. Ramesh Vaddi, (now at NTU Singapore), **Project** Link Here

Self Balancing Two Wheel Robot   *(Sep 2017-Dec 2017)*

- Self-balancing two wheel Robot which Balances itself and Automatically corrects its position on disturbance
- Course Project under Dr. Debanjan Das ECE Dept. (Asst. Prof, IIIT NR), **Project** Link Here

Healthcare Management System   *(Jan 2017-May 2017)*

- Made a healthcare management system, (web application) for both Doctors and Patients A course project for DBMS Course taken at IIIT NR
- Course Project under Prof. O.P. Vyas(now, at IIIT Allahabad), **Project** Link Here

Institute Weather Monitoring And Logging System *(Mar 2017-May 2017)*

- A prototype was made to capture institute weather and making the database
- Course Project under Dr. Debanjan Das ECE Dept. (Asst. Prof, IIIT NR)

Workshops Attended

- International Program on European Fellowship and Opportunities with Funding
- Workshop in the Skill and Knowledge Enhancement Programme (IEEE-SKEP 2016)
- Start Up India Program organized by Govt. of India in Chhattisgarh.

Scholastic Achievements

- **Rank 140th of 5455 Societe Generale BrainWise Machine Learning Challange 2019-Hackerearth**
  (used Classification and Clustering Algorithms)
- **Rank 6th of 12 Malware Detection Machine Learning Challenge 2018-Kaggle**
  (used Classification Algorithms)
- **Medhavi Chhatra Samman-2015**
  Secured 8th Rank in State and 4th Rank in District in 12th Board Exam.
- **UIET Talent Quiz Award-2014**
  Secured 1st Rank in College.
- **Qualified NTSE Exam in 8th Class**

Relevant Courses

- **Computer Science:** Data Communication and Computer Networks, Operating Systems, Theory of Computation, Analysis and Design of Algorithms, Programming Languages, Computer Organization, Discrete Mathematics, Machine Learning, Artificial Intelligence, Data Mining, Cryptography, Network Security, Big Data Analytics, Database Management Systems, Software Engineering, Object-Oriented Methodologies
- **Electronics:** VLSI Design and Technology, Embedded Systems, Digital Logic Design, Digital Signal Processing, Signals and Systems, Sensors and Actuators, Network Analysis.
- **Others:** Professional Communication, Principles of Management, Mathematics.

Technical Skills

- **Computing And Algorithms**
  Data Science(Data Presentation, Visualization, and Analysis), Machine Learning Algorithms, Python, Java, Statistics, SQL, C, C++, HTML, CSS, Bootstrap, Django, Flask, Rivescript, HADOOP
- **Hardware Prototyping**
  Arduino, Raspberry PI, RTL SDR, FPGA
- **Professional Software**
  Anaconda(Jupyter Notebook, Spyder, Orange), MATLAB/Simulink, Cadence, XILINX Vivado, GCC, G++, Adobe (Photoshop, Illustrator), Oracle and MySQL Developer, MS-Office, GNU Radio, Pycharm
- **Operating System**
  Linux, Ubuntu, Windows

Position of Responsibility

- **Campus Ambassador:** Technex-*2018,2019*-(Annual Techno-Management Fest IIT (BHU) Varanasi)
- **Event Coordinator:** Technovate-*2018* (Event Head of the Robotics Event - ROBO Soccer)
- **Event Management Coordinator:** Technovate-*2017* (Techno-Cultural Fest IIIT Naya Raipur)