# Sahil Dhull


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## Academic Qualifications

| Year | Degree/Certificate | Institute | CPI/% |
|---|---|---|---|
| 2016 - Present | B.Tech | Indian Institute of Technology, Kanpur | 8.7/10 |
| 2016 | CBSE(XII) | Abhinav Public School, New Delhi | 97.4% |
| 2014 | CBSE(X) | DAV Public School, Kurukshetra | 10/10 |

## Scholastic Achievements

- Secured **AIR 230** in **JEE Advanced 2016** among the 2 Lakh shortlisted candidates.
- Secured **AIR 27** in **JEE Mains 2016** among the 15 Lakh candidates.
- Cleared National Standard Examination in Physics (**NSEP**), National Standard Examination in Astronomy (**NSEA**) conducted by IAPT (Indian Association of Physics Teachers)
- Awarded **KVPY 2014** fellowship, securing **AIR 46** (out of a total of about 40,000 students).
- Participated in **North-Indian Science Fair 2012** at National Science Center, New Delhi.
- Participated in **CBSE Regional Exhibition 2012**.
- Awarded **National Talent Search Scholarship 2012** by National Council of Educational Research and Training.
- Secured **1st** position in **State level Essay Writing Competition** by Govt. of Haryana in **2010**.

## Projects

- **Painter and Genre Classification** | CS771A [Machine Learning] *(Aug'18 - Nov'18)*
  **Prof. Piyush Rai**, Department of Computer Science and Engineering
  - Used 2 approaches: Self-designed CNN and Classification after Feature extraction.
  - Constructed CNN using convolutions, ReLU activation and Max Pooling and, gained a maximum of 50% test accuracy.
  - Used VGG16 and ResNet50 for feature extraction and for classifcation, used Logistic regression, SVM (with RBF kernel) and K-Nearest Neighbour. Gained a maximum test accuracy of 75.2%.
- **Deliver It App** | CS252A [Computing Laboratory II] *(Aug'18 - Nov'18)*
  **Prof. Nisheeth Srivastava**, Department of Computer Science and Engineering
  - Designed a community based delivery app for Android and iOS using geolocation services on IONIC Framework.
  - Used Firebase Authentication Service and Firebase Realtime Database.
- **Fusion of Inertial Sensing IoT Devices** | CS664A [IoT System Design] *(May'18 - July'18)*
  **Prof. Amey Karkare**, Department of Computer Science and Engineering
  - Learnt about Hardware and Software aspects of OBLU (Multi IMU inertial sensing device).
  - Designed and Implemented a Fusion algorithm on Dual Foot-mounted Inertial Sensors data to reduce Systematic Heading Drift resulting in a more precise navigation system.
  - Plotted Real-time graphs showing Raw and Corrected trajectories to find out Drift and Distance Errors.
- **SAE IIT Kanpur** | Team Member *(Jan'17 - Feb'18)*
  **Prof. Shantanu De**, Department of Mechanical Engineering
  - Designed and fabricated a Formula race car (F-18) for Formula Bharat, a national collegiate design challenge.
  - Secured $9^{th}$ position in Design Event, $6^{th}$ in Business Plan and $15^{th}$ position among 55 teams at Formula Bharat 2018.

## Technical Skills

- **Programming:** C, C++, Verilog(HDL), Shell Scripting **;** Familiar: Python, HTML, PHP, Javascript, SQL
- **Familiar Tools:** Vim, SPIM, Git, Octave, GNUPlot, R, LaTeX, GPU programming with CUDA, IONIC Framework
- **Softwares:** ANSYS (Structural), AutoCAD Fusion, Solidworks, Autodesk Inventor

## Relevant Courses

| | | |
|---|---|---|
| Compiler Design* | Database Management System* | Formal Methods in Robotics* |
| Machine Learning | Algorithms-II | Operating Systems |
| IoT System Design | Data Structure and Algorithms | Computer Organization |
| Probability and Statistics | Computing Laboratory | Introduction to Electronics |

*ongoing courses

## Extra-Curricular Activities

- Bagged 3rd position as pool (Hall-3) in Robotricks, Takneek'16 (Inter-hall Technical Competition):
  Built a robot to preform simple tasks like lifting blocks and detecting coloured strips.
- Took part in Dance Competition in Galaxy(Inter-hall Cultural Event)-2017.
- Played Lawn Tennis as Compulsory Physical Activity.
- Participation at State Level Swimming Competition in Haryana, Category - Under 14 boys.