Mohit Kumar Singh Contact: +91-7318019021 | Email: [mohitks@iitk.ac.in](mailto:mohitks@iitk.ac.in) |git: [MohitKS5](https://github.com/MohitKS5) 

Second Year Undergraduate, Department of Chemical Engineering

Educational Qualifications

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Degree/Certificate | Institute | Performance |
| 2016-Present | B. Tech, Chemical Engineering | Indian Institute of Technology, Kanpur | **7.9/10** |
| 2016 | Grade 12th (CBSE) | DAV Bistupur, Jamshedpur | **94.8%** |
| 2014 | Grade 10th (CBSE) | SJDAV Public School, CBSA, Singhbhum(W) | **10.0/10.0** |

Scholastic Achievements

* Achieved an **All India Rank** of **1969** among **1.5 lakh candidates** in the **JEE Advanced** 2016.
* Scored 223/360 in JEE MAINS 2016.

Projects

**IITK Motorsports** *(Faculty Advisor – Dr. Santanu De, Department of Mechanical Engineering, IIT Kanpur)*

**Chassis Subsystem** design for the **Formula student vehicle** *March’17 –present*

*(Budget –INR* ***30 lakhs****)*

* Worked on a **yearlong project** involving the **designing and manufacturing** of a **Formula Student Vehicle** for participation in **Formula Bharat**
* Performed **Frame Analysis** of Chassis in Solidworks and Ansys Static Structural
* Designed Jigs and fixtures for suspension subsystem for proper welding operation
* Performed Adhesive testing and Quasi-static crush testing of non-standard Impact Attenuator

**IITKMS Website**

*(Faculty Advisor – Dr. Santanu De, Department of Mechanical Engineering, IIT Kanpur)* *March’17-present*

* Built a Web Application from scratch using **Angular 4** as the framework.
* Worked with **Firebase** for authentication, cloud storage and real–time databasing.
* Used **Google sheets** as UI for frontend content manager and its api for data fetching.

**Antaragni ’17 Website**  *Apr’17 –Oct’17*

* Used full **MEAN** stack to develop the website for college fest.
* Used angular 4 framework for modularity, animations and website optimization.
* Backend written in typescript provided REST api with scalability in mind.
* Dynamic website with flexibility in design and content. Element’s arrangement and display could be changed by a GUI.
* Provided a flexible UI to update the contents of frontend in a user-friendly way.

**Techkriti ’18 Website**  *Sep’17 – Apr ‘18*

* Using angular framework to develop the website.
* Backend in JavaScript supporting rest api.
* Supporting an android app.

**Continuous Bottle Labeling Machine**

*(Course Project: Introduction to Manufacturing Processes-2, Instructor- Prof.JR Kumar)* *Jul’17-Nov’17*

* Designed **Bottle labeller,** a machine that could take bottles from a stack, label it and roll out as a continuous process.
* Used **CAD modeling** while deciding various dimensions and parameters and created a final CAD model using **DS SOLDWORKS 2016**
* Successfully manufactured a working prototype of the product using various manufacturing methods(Lathing , Milling , Drilling)

**Code.Fun.Do**

*(1-week app development program conducted by Microsoft)* *March’17*

* Successfully completed a web app aimed to help college students choose courses and manage them.
* Used cross-platform Universal App Platform (Microsoft Azure) for windows 10 and apache server.
* The app simply displayed a filtered list of courses based on user info during registration.
* Also, provided cloud space to store course content and relevant links in an organized way just by a drag and drop.

**Antaragni ’18 Website**  *Apr’17 –Oct’17*

* Used full **MEAN** stack to develop the website for college fest.
* Used angular 6 framework with material for modularity, animations and website optimization.
* Backend written in typescript with firebase.
* Use of firebase cloud functions, google cloud storage and cloud firestore for databasing and storage.
* Registration and Payments with townscript through the website for various events and competitions.
* Provided a flexible UI to update the contents of frontend in a user-friendly way. Provided with real-time editing and three-way binding
* Facebook login and data fetching from graph API.
* Fetching posts from antaragni page and allow sharing on fb from the website.

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Technical Skills

* **Programming**
  + Languages
    - *Web*: Typescript(Intermediate), ES6(Intermediate), Golang(intermediate), dart(intermediate)
    - *Others*: Matlab(Intermediate), Octave(Intermediate), C++(Intermediate)
    - Framework: Angular 6 (Expert), Material(Expert), Mookit, Node + Express(Intermediate), mongoDB(Intermediate), postgres (expert), flutter for android and IOS (intermediate)
  + Utilities: HTML/CSS(Expert), Git, LATEX
  + Exposure: Docker(Beginner), Postgres(Intermediate) , WebSockets(Beginner)
  + Tools: Microsoft Azure, Android Studio.
* **3D Modeling**
  + Designing: DS Solidworks 2016(Intermediate) , Fusion 360 ,Autodesk, Abaqus
  + Analysis: Ansys Static structural and Explicit Dynamics.(Expert)

Positions of Responsibility

**Web Developer, IITK Motorsports**  *Mar’17 – present*

* Exposing the potential of team and project in a representative manner to lure the sponsors and car enthusiasts.
* Responsible for ensuring regular update and functioning of the FSAE website.

**Chassis, IITK Motorsports**  *Mar’17 – present*

* Ensured completion of design and fabrication of chassis.
* Performed a research on the use of Aluminum rear Bulkhead.
* Produced a pre-report and the use of non-standard impact attenuator with proper lab testing.
* Significantly contributed in the final CAD assembly integrating all subsystems in DS Solidworks 2016.

**Senior Executive, Web, Antaragni, IIT Kanpur**  *Apr’17 – Oct’17*

* Designed a website for Antaragni, the largest college fest in northern India.
* Provided a portal and maintained the Database of contacts, registered events and payments of about **8000** participants.
* Designed a portal for campus ambassadors and provided them with an online platform linked to social media for publicity of the fest.

**Senior Executive , Web ,Techkriti, IIT Kanpur**  *Sep’17 – Apr’18*

* Designing a website for Techkriti, one of the largest Tech fests in India.
* Ensuring the promulgation of the fest through deployment and regular update of website & app.
* Make sure the web optimization and accessibility of the website to masses.

**Student Guide , Institute Counselling Service**  *Jul’17 – present*

* Assisted a group of 5 freshmen in adapting to campus environment and resolved difficulties faced by them. Still guiding them through the 4 years journey.
* Contributed in successful conduction of a 7 day Orientation Program for 850 freshmen.

**Head Web, Antaragni, IIT Kanpur**  *Apr’18 – present*

* Leading the team designing a website for Antaragni, the largest college fest in northern India.
* Provided a portal and maintained the Database of contacts, registered events and payments of about **8000** participants.
* Designed a portal for campus ambassadors and provided them with an online platform linked to social media for publicity of the fest.
* Designing 8 websites(4 for Roadtrips - Synchronicity, DJwar, Nationals, Prodigy + 1 pre website + 1 beta /theme revealer website + final website + campus ambassador website ) and 2 apps(Android + IOS) for the college fest.

Freelancing

**Web Developer, Finer Edge**  *Mar’17 – present*

* Prepare a website [finer Edge](http://fineredge.net) for the multinational architectural company.
* Display Gallery of about 800 Pictures in an elegant way.
* Adhere to the demands of the client.

Relevant links to Works/Reports

**Web**

* Homepage: [mohitks@iitk](http://home.iitk.ac.in/~mohitks/)
* Antaragni ’17 Website(may be offline after the fest): <https://old.antaragni.in/>
* Antaragni’18 Websites [campus Ambassador](http://ca.antaragni.in), [Admin Portal](http://backend.antaragni.in), [Main Site](https://antaragni.in)
* Techkriti ’18 Website(may be offline after the fest): [Techkriti '18](https://techkriti.org/)
* IITKMS(FSAE) Website: [iitkms.in](http://www.iitk.ac.in/ame/sae/)

**Reports**

* Chassis Design: [Aluminum Honeycomb](https://docs.google.com/document/d/1kEaEA1to9C5M_Hcjbw08CwgKOzwsWCi6Ac556o90L_s/edit?usp=sharing), [Aluminum Rear Bulkhead](https://docs.google.com/document/d/1QNN9jOmOLWCuGPe28j_cbtKvcieSKQD0S_D-onzQRsY/edit?usp=sharing) *etc.*

Relevant Courses

* Chemical Engineering : Introduction To Chemical Engineering , Thermodynamics#, Numerical Methods#
* Humanity Sciences: Elements Of Visual Design, Introduction To Logic#
* Others : Calculus, Linear Algebra, Ordinary Differential Equations, Partial Differential Equations

(# - *ongoing courses*)

Extra-Curricular Activities

* Stood runner-up in Design-o-flare competition,Takneek’17 , using **DS SOLDWORKS 2016**
* Designed and fabricated a Robot that is capable of gripping and lifting objects, in Takneek’16.