AYUSH SINHA

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Mechanical Engineering
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EDUCATION

Qualification	Institute	Year	Performance
BTech Mechanical Engineering	Indian Institute of Technology Kanpur	2013-2017	CPI 9.0
Intermediate (12th CBSE)	Delhi Public School, Indira Nagar, Lucknow	2013	92.4%
High School (10th CBSE)	Delhi Public School, Indira Nagar, Lucknow	2011	CGPA 10

ACADEMIC ACHIEVEMENTS

- Received **Academic Excellence Award** for the year 2013-14 at Indian Institute of Technology Kanpur
- Awarded Certificate of Merit for being among the **Top 0.1%** of successful candidates of AISSCE 2013 in Physics by CBSE
- Awarded Gold Medal for securing **City Rank 1** and **State Rank 8** in Science Olympiad Foundation's 14th National Science Olympiad
- Awarded Gold Medal for securing **All India Rank 41** in National Level Science Talent Search Examination 2012
- Awarded Certificate of Merit for obtaining **highest grade (A1) in all subjects** in AISSE 2011 by CBSE

INTERNSHIP

- **TATA MOTORS LIMITED LUCKNOW**
  SUMMER INTERN
  19TH MAY – 16TH JUNE 2015
  - **Problem resolution** after proper **Root Cause Analysis** for specified part belonging to vehicle's chassis
  - **Implementation** of Quality gates at supplier's end to ensure that part quality aligns with TML's standards
  - Studied the functioning of entire TML plant along with the **manufacturing processes** at supplier's end

PROJECTS

- **SOLAR POWERED VAPOUR TURBINE** (Mentor: Dr. Santanu De, Mechanical Engineering, IITK)
  RESEARCH PROJECT (19TH JUNE – 20TH JULY 2015)
  - **Thermodynamic Analysis** of cycle designs proposed for the system
  - Simulations of designs using **ASPEN HYSYS** for comparison of their efficiencies
- **ROBOCON 2015 – ROBOMINTON** (Advisor: Prof. Bhaskar Dasgupta, Centre for Mechatronics, IITK)
  MECHATRONICS PROJECT (SEPTEMBER 2014 – MARCH 2015)
  - **Designed** and **built two badminton playing robots** for doubles match on an actual size court
  - **Developed CAD models** of the robots and **manufactured** them using traditional manufacturing processes
  - Used **Pneumatic Actuators and Electric Motors** for implementing various badminton racket strokes
  - Finished **Eleventh in eighty-five** teams representing different universities from all over India
- **AUTOMATIC CAR PARKING**
  COURSE PROJECT (JANUARY 2015 – APRIL 2015)
  - **Designed** and **manufactured** a functional model of an automatic car parking using gear systems

KEY COURSES AND SKILLS

- **CORE :** Mechanics of Solids**,** Manufacturing Processes, Theory of Mechanisms and Machines, Nature and Properties of Materials, Fluid Mechanics, Engineering Design and Graphics, Thermodynamics, Dynamics, Heat and Mass Transfer
- **BREADTH :** Fundamentals of Computing, Introduction to Electronics, Introduction to Electrical Engineering, Complex Variables, Partial Differential Equations, Matrix and Determinants/ODE, Introduction to Electrodynamics
- **SKILLS :** Autodesk Inventor, Aspen HYSYS, Autodesk AutoCAD, Matlab, Web Development, Android Development, C, C++

POSITION OF RESPONSIBILITY

- **SENIOR MEMBER – TEAM ROBOCON IITK 2015**
  - **Represented IIT Kanpur** in National Robocon 2015 (Robotics Contest) organized in Pune, Maharashtra
  - Worked with a **team comprising of 30 students** from different engineering disciplines and years of study
  - **Led and guided fifteen juniors** to create two robots for playing doubles badminton matches against other teams

EXTRA CURRICULAR ACTIVITIES / INTERESTS

- Participated in college informal competitions/events (Crypto, Treasure Hunt, CultX)
- Participated in Inter-hall competitions such as Stop-motion Film making and Gear Loose