

ARNESH SUKUMAR

PERSONAL AND CONTACT INFORMATION

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UG Chemical Sophomore

Sex: Male

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SCHOLASTIC ACHIEVEMENTS

- Pursuing **Majors in Chemical Engineering** along with a **minor in Design** from Industrial Design Centre at the Indian Institute of Technology Bombay, India [2014 – 2018]
- Cumulative Performance Index (**CPI**) **7.44** on 10
- Secured **AIR 1122(top 0.75%)** in JEE(Advanced) out of nearly 0.15 million students [2014]
- Achieved **99.88 percentile** in JEE(Main) out of nearly 1.4 million students [2014]
- Acquired **State rank 1** (Tamil Nadu) in JEE (Architecture) out of 0.15 million students [2014]
- Received **KVPY Mentorship(Scholarship)** with an **All India Rank 181** out of 10000+ students [2013]
- Scored **97.2%** in CBSE class 12 Examination with 100 of 100 in Mathematics [2014]
- Qualified for **INSPIRE scholarship** based on performance in grade 12 (**top 1% of country**) [2014]
- Shortlisted for Indian National Astronomy Olympiad and Regional Math Olympiad Multiple times

TECHNICAL PROJECTS

CLASSROOM FOR ALL | Defining the design parameters for a perfect classroom

Guide: Prof. G G Ray, Prof. N Sadhu (IDC course project – Design) [July '15 – November '15]

- **Analyzed and Redesigned the classroom doors** so that they are more comfortable to utilize and Evaluated features to be added such as Temperature Modulation, Sliding Doors, Biometric etc.
- Proposed a **near-perfect design** of an ideal classroom that can **accommodate all kinds of people** especially considering the problems faced by people with disabilities
- Developed the set of **design parameters** and **features** to be included in the ideal classroom for **visually-challenged students** as a part of the overall project coordinating with a team of **5 members**

NANO-INDENTATION OF HUMAN HAIR | Nano-indenting cosmetic-applied male/female Human hair

Guide: Prof. Prita Pant (Metallurgy and Material Science) [May'15 – June '15]

- Performed **Nano-indentation on Human hair** considering **Gender and Cosmetics applied**
- Nano-indentation is the process of indenting Nano-sized holes in a material to determine its **material properties** by measuring its hardness and the force applied on it.
- Handled and operated the Nano Indenter under the guidance of a trained professional
- Evaluated the **hardness of the hair samples** by keeping variables such as age almost constant

BIO SYNTH | Producing biodiesel from an autonomous biodiesel producing unit at institute level

Guide: Prof. Sanjay Mahajani (Chemical Engineering) [May '15 – June '15]

- Learnt about **Bio-diesel** and did literature reading on water-washing and glycerolysis
- Experimented with a few changes in the procedure of **water-washing and distillation**
- Made a presentation using **graphical analysis** that stood out from the rest
- Selected for the **future Biosynth batch** and coordinating with a team of 21 students

GRAPHING SCIENTIFIC CALCULATOR | Coded a Graphing Scientific Calculator using C++

Guide: Prof. Deepak Phatak, Prof. Supratik C (Computer Science) [August '15 – November '15]

- Ideated and developed an algorithm for the **graphing scientific calculator**
- Programmed the functions, **coded the parsing** in **C++** in a 4 membered team
- Created the user interface using **graphics.h**, **SimpleCPP** and **GTK** graphical packages for **C++**

NATIONAL CHILDREN'S SCIENCE CONGRESS | Attempted to provide a solution for the lack of farming land

Guide: Dr. Mohana Radhika (Biology) [October '10]

- Studied **hydroponics** and suggested a method to implement it at a low cost in villages
- Constructed a model of hydroponics in google earth and presented the same to a panel of judges

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, C, SQL, HTML, CSS
- **Tools and Software:** MATLAB, AutoCAD, Solidworks, Illustrator, Photoshop

KEY COURSES

- **Chemical Engineering** – Introduction to Chemical Engineering, Transport Phenomena, Thermodynamics*, Heat transfer*, Process Fluid Mechanics*, Process plant Simulation*
- **Computer Science** – Computer Programming and Utilization, Computational Methods Lab
- **Mathematics/Statistics** – Calculus, Linear Algebra, Differential Equations (I & II), Numerical Analysis, Introduction to Data Analysis*
- **Introductory Courses** – Quantum Mechanics, Electricity and Magnetism, Biology, Economics*, Ergonomics, Philosophy
- **Other Courses** – Biosensors and BioMEMS*

EXPERIENCE

OPERATIONS INTERN | CR2 Technologies Ltd. (Product – Medbox) [December '15]

- Created a presentation on the **App flow** and **UI enhancements** and presented it to the Tech team
- Compared the app with other competitors and **suggested few changes and additions** to the product
- Prepared a **comprehensive analysis** of around 1200 calls and presented it to the Management
- Brainstormed innovative ways to **market the product** and implemented them successfully
- Coordinated with a team of 4 other interns to **ideate and implement Business Development ideas**

POSITIONS OF RESPONSIBILITY

CONVENER | Institute Aquatics Club, IITB [May '15-Present]

- Initiating **revival** of the event "**Swimming Gala**", a prestigious annual 4-day swimming competition for swimmers from Maharashtra to prove their expertise, which hasn't taken place since 2007
- Worked in a team to successfully **organize a variety of events** like the freshmen sports orientation, sports treasure hunt and Freshmen fitness test managing around **800 students**
- Managing the institute aquatics team by **coordinating practice sessions** and other events

HORIZONS COORDINATOR | Mood Indigo 2015 [March '15 – December '15]

- **Negotiated** with unique artists/performers of over **20 countries** to showcase rare art forms
- **Led a team** of more than 20 organizers in ideating and organizing over 10 events
- Conceptualized and **ideated Food-Fest**, giving a cultural dimension to Food by chef demonstrations, workshops, activities and interactive sessions with the pioneers in food art

MESS COMMITTEE HEAD | Maharishi International Residential School [June '12 - January '14]

- **Presided** over the schools' **20-member mess committee** for 2 years
- Decided **every month's menu** with the committee considering the requests and complaints of the students constrained to an **annual budget of around 180 million INR**, serving around **2500 people**

SCHOOL PUPIL LEADER | Maharishi International Residential School [June '12 – March '13]

- **Elected** by secondary school students to **supervise over school and hostel affairs**, responsibly managed the discipline and smooth conduct of events in a school with a **strength of 2200 students**
- Successfully **organized cultural activities** and represented the school in **leadership events**

EXTRA CURRICULAR ACHIEVEMENTS

Aquatics

- Selected as a part of the **Inter IIT Aquatics Camp 2014** and **Institute Water Polo Team 2015**
- Came **Fourth in Individual Medley** and **Third in Water Polo** in a nation-wide Aquatics Meet [2015]
- Won **silver** in the **Medley relay** in Intra College swimming General Championship [2015]
- Placed **4th** (out of around 150) in **Swimathon** (Swam **20.5 km** in **12 continuous hours**) [2015]

Other

- Fluency in **English**, working proficiency in **French**, elementary proficiency in **German**
- Participated in the Remote Control Plane and Bot making competition held in IIT Bombay
- Was awarded **special mention** in freshiezza **video making** (IITB freshmen competitions)
- Represented school as a part of **Swimming, Volleyball and Throwball(Captain)** team