

## EDUCATIONAL QUALIFICATIONS

YEAR	QUALIFICATION	INSTITUTION	PERFORMANCE
2019	B.Tech (Electrical Engineering + Computer Science and Engineering)	Indian Institute of Technology, Kanpur	8.1/10.0
2014	Class XII (CBSE)	Aklank Public School, Kota	93.6%
2012	Class X (ICSE)	City Montessori School, Gomti Nagar, Lucknow	97.8%

## SCHOLASTIC ACHIEVEMENTS

- Achieved **AIR - 589** (in common merit list) in JEE – (Advanced) 2014
- Secured **AIR - 1649** in JEE – (Mains) from among 1.5 million candidates 2014
- Awarded **KVPY Fellowship**; Achieved **AIR - 452** out of 40,000 students, and offered a scholarship of ₹ 80,000 per annum 2014
- Ranked amongst the **top 1600** students in the **National Talent Search Examination 2010**, conducted by NCERT 2010

## INTERNSHIPS

### Qualcomm Hardware Development Centre, Bangalore

May - July 2017

<b>Background</b>	<ul style="list-style-type: none"> <li>Worked in the <b>Camera Hardware segment towards reducing power consumption</b> in the image processing pipeline</li> </ul>
<b>Process</b>	<p><i>Hardware Module for Reducing Computation in the image Processing Pipeline</i></p> <ul style="list-style-type: none"> <li>Implemented a <b>US patented (pending approval) module to reduce computation</b> and power used</li> <li>Looked at <b>multiple scheduling algorithms</b> for usage in the module and <b>compared performances on PPA metrics</b></li> <li><b>Integrated the designed module</b> into existing SOC and compared power consumption of the two pipelines</li> </ul>
<b>Achievements</b>	<ul style="list-style-type: none"> <li>Received a <b>Pre-Placement Offer</b> from the company. The module produced an average ~ <b>10% power reduction</b></li> <li><b>Improved the scheduling algorithm</b> utilized, <b>pushing down the area and power consumption</b> of module</li> </ul>

## POSITIONS OF RESPONSIBILITY

### Chairperson, Students' Senate, IIT Kanpur (elected)

March 2018 - Present

<b>Leadership</b>	<p><i>Leader of the chief student legislative body of IIT Kanpur</i></p> <ul style="list-style-type: none"> <li>Represent <b>6800 students</b> in the <b>Academic Senate</b>; directly monitor the work of 19 student nominees to the 6 Academic Senate subcommittees <b>governing academic, disciplinary and scholarship rules and curriculum</b></li> <li>Responsible for <b>Chairing</b> the monthly meetings of the <b>60 senators</b> elected by the student body</li> <li>Responsible for the management of a <b>fund of Rs 250,000</b> dedicated to promoting novel activities in campus</li> </ul>
<b>Initiatives</b>	<ul style="list-style-type: none"> <li><b>Introduced 2 standing sub-committees</b> focused separately on UG and PG issues to streamline Senate functioning</li> <li><b>Introduced financial reforms</b> for the semi-autonomous festivals, allowing greater control over festival finances</li> <li><b>Revamped the Gymkhana Calendar</b> to distribute workload and improve the conduction of inter-hall competitions</li> <li><b>Initiated Departmental Mentorship Societies</b> to facilitate Faculty–Student interaction and mentorship</li> </ul>
<b>Administrative</b>	<ul style="list-style-type: none"> <li>Coordinated the handling of <b>appeals against termination</b> of <b>124</b> students with <b>79</b> getting reinstated</li> <li>Oversaw the allocation and usage of annual budget of <b>₹ 34 lakhs</b> of the Students' Gymkhana</li> </ul>

### Senator, Students' Senate (elected)

March 2015 – Present

- As **Parliamentarian, Students' Senate (separately elected)**, drafted amendments to the Constitution, on various executive reforms
- Drafted appendices to the Constitution** on the Rules & Procedures of the Senate and the Constitution of the COSHA
- Lobbied for the **merger of two major executive councils** of the Gymkhana and laid down the vision for the newly formed council
- Reformed institute policy**, with the Academic Senate allowing acceptance of Double Major students in the 8<sup>th</sup> Semester

## PUBLICATIONS

### Near-field Acoustic Source Localization using Spherical Harmonic Features

July 2019

<b>Journal</b>	<ul style="list-style-type: none"> <li>Accepted in the <b>IEEE Transactions on Audio, Speech and Language Processing</b> (Impact Factor of 3.531)</li> </ul>
<b>Process</b>	<p><i>Novel features developed for usage in CNNs for nearfield source range estimation</i></p> <ul style="list-style-type: none"> <li>Designed signal-invariant and directional-independent features for range estimation in reverberant conditions</li> </ul>

### Radial Filter Design Using Kaiser Window Polynomials for Speech Source Separation

July 2018

<b>Conference</b>	<ul style="list-style-type: none"> <li>Accepted in the <b>International Conference on Signal Processing and Communication, 2018</b> (Median H-index 10)</li> </ul>
<b>Process</b>	<p><i>Novel Filter Design for Spatial Source Enhancement and Noise Filtering</i></p> <ul style="list-style-type: none"> <li>Designed a <b>novel family of polynomials</b>, Kaiser Polynomials, which matched the specifications for the task</li> <li>Designed filters <b>beat state of the art</b> filters in standard metrics of source separation such as PESQ, LSD and SDR</li> </ul>

## PROJECTS

### Predicting customer churn in the telecom sector (Project under Prof. Faiz Hamid)

May – July 2016

- Built predictive models (ANN, Naïve Bayesian) on **70,000 samples** to tackle the problem of **client churn** in the telecom sector
- Determined the critical factors affecting churn and developed an action plan for customer retention

## EXTRA-CURRICULAR ACTIVITIES

<b>Managerial</b>	<ul style="list-style-type: none"> <li>Organized various <b>Professional Nights, Folk Dances, Talks and Socio-Political Debates</b> in a 15 member PR team</li> <li>Secured funding from the <b>Israel Embassy</b> for the performance of 2 ensemble artists at Antaragni 2015</li> <li><b>Conducted Elections</b> for Hall Executive Committee, with an <b>electorate of 650 students</b>, in the Hall of Residence II</li> </ul>
<b>Journalism</b>	<ul style="list-style-type: none"> <li>Highlighted the need for disabled friendly infrastructure at the institute through the campus newsletter</li> </ul>
<b>Recreation</b>	<ul style="list-style-type: none"> <li>Active member of the English Literary Society - Avid reader and irregular poet</li> <li>Regular in the Card and Board Games club with a fascination for Catan and Resistance: Avalon</li> </ul>