



## Yagyaansh Khaneja

B.Tech. (Engineering Physics)

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Indian Institute of  
Technology  
Roorkee



## Education

Year	Degree/Examination	Institution/Board	CGPA/ Percentage
2021	B.Tech. Engineering Physics	<a href="#">Indian Institute of Technology, Roorkee</a>	7.113 (First Division)
2017	Intermediate (Class XII)	<a href="#">Rukmini Devi Public School</a> (CBSE Board)	94.20 %
2015	Matriculate (Class X)	Rukmini Devi Public School (CBSE Board)	10.000

## Experience

### Head of Innovation | [Divos Hardware \(Family Business\)](#)

Sept 2022 - Present

- Collating Sales data to potentially apply ML models in predicting sales & demand
- Self-Designed a [catalog](#) of items, from scratch, increasing ease-of-doing business!
- Building an [online store](#), to carefully catalog and standardize 1000+ products. (also selling on [Meesho](#))
- On-boarded accounts on cloud, increasing speed of operations; **2x the revenue to 1 million USD** (in less than a year).
- Building solutions for effective accounting in logistics (trading goods)
- Introduced **unique** classification system for hardware items, improving logistic management.

### Research & Site Intern | [Himalayan Institute of Alternatives, Ladakh \(SONAM WANGCHUK\)](#)

Jan 2022 - May 2022

- Drafted a construction training manual for [Passive Solar Heated Buildings](#).
- Monitored [weather data](#) using Campbell Scientific weather station installed at various locations in Ladakh.
- Helped in the installation of [LiFi system](#) (for high speed internet access to remote villages cheaply).
- Maintained the battery house of a 20kW solar PV system.
- Set up the panels, batteries and inverter for a new 7.5 kW solar PV system at HIAL Campus.
- Assisted in the design & installation of a new Stevenson Screen made on site.

### Research Summer [Camp \(Photonics\)](#) | [ITMO University, St. Petersburg, Russia](#)

May 2019 - June 2019

- Worked on "THz generation from laser filamentation in different liquids".
- Studied Quantum Information, Holography, Security of QKD systems, femtosecond lasers.
- Simulated interference and diffraction pattern for different waveforms and apertures.

## Volunteering

### Science/Maths/English Teacher | [Hanoi, Vietnam](#)

July 2022 - Aug 2022

- Volunteered in the sub-urbs of Hanoi, Vietnam as a teacher. ([Workaway](#))

### Science/Maths/English Teacher | [SECMOL, Ladakh](#)

May 2022 - July 2022

- Volunteered in an [alternate school](#) for dropout students.
- Prepared dropouts to pass class 10<sup>th</sup> examination (quite a challenge)
- Taught **Science** and **Maths** using fun and practical [experiments](#).
- Took hobby classes in **photography** and **astronomy** for interested students.

## Projects

### Personal Website | [Self](#)

Oct 2021 - Nov 2021

- Hard Coded my website [yagyaansh.com](#) using basic HTML, CSS and JavaScript.
- Hosted the static website on [GitHub](#).

### B. Tech Project | [IIT Roorkee](#)

Aug 2020 - Sept 2021

- Design & Simulation of photonic switch based on GST embedded SOI rib waveguides (1 THz) (CST MW Studio & [COMSOL](#)).

- Designed a Non-volatile on-off photonic switch (high static performance) based on GST embedded SOI channel waveguide for operation at 2.1um. (CST MW Studio).

Dec 2018 - June 2020

- Studied **Phased Array Waveguides & WDM** for applications in data communication.

## Skills

Computer Languages	FORTRAN, Python, HTML5, CSS3, JavaScript, SQLite, LaTeX
Software Skills	MS Office, MATLAB, Lightroom, CST MW Studio, COMSOL
Languages Known	English (SRW - Native), Hindi (SRW - Native), French (SRW - Novice), Punjabi (S - Novice)

S - Speaking, R - Reading, W - Writing

Certified Courses	Machine Learning by Andrew NG ( <a href="#">Certificate</a> ), Web Design for Everybody: Specialization ( <a href="#">Certificate</a> ), Internet: History, technology & Security ( <a href="#">Certificate</a> ), Python for Everybody: Specialization ( <a href="#">Certificate</a> )
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## Achievements

- Centre Top 10% in part A of National Graduate Physics Examination (NGPE), 2019.
- AIR 2933 in **JEE** (Mains) 2017 Paper-1 (Engineering) [**Top 0.2%**]
- AIR 618 in JEE (Mains) 2017 Paper-2 (Architecture)
- AIR 3188 in JEE (Advanced) 2017 [**Top 2.1%**]
- Invited in National Science Camp (VIJYOSHI) 2016, by KVPY, the INSPIRE Program, DST and IISER Kolkata.
- AIR 300 in **KVPY** (Kishore Vaigyanik Protsahan Yojana) - 2015 in SA (class XI) General category.
- Awarded scholarship for excellence in **NTSE (National Talent Search Examination)** 2015. [**Top 0.1%**]
- Letter of Appreciation by Smriti Irani (**HRD Minister**, Govt. of India, 2015) for exceptional performance in CBSE Examination, 2015.
- **Rank 7** in Science Open Merit Test (SOMT) - 2015 conducted by Delhi Science Teachers' Forum.
- AIR 578 Rank in National Level Science Talent Search Examination (NSTSE), 2015.
- AIR 190 in FIITJEE Talent Reward Exam (FTRE), 2014.
- **Rank 10** in Junior Science Talent Search Examination (JSTSE) 2013-14 conducted by Science Branch of DoE, Govt. of NCT Delhi.

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## Extras

Additional Secretary   <b>Photography Section, IIT Roorkee</b>	Dec 2018 - May 2021
Coordinator   <b>Thomso - Cultural Fest, IIT Roorkee</b>	Oct 2019
Content Manager & Events Executive Member   <b>Srishti - Technical Exhibition, IIT Roorkee</b>	Jan 2019 - Mar 2019
Volunteer   <b>National Social Service (NSS), IIT Roorkee</b>	July 2017 - May 2018
National French Spell Bee   <b>Le Frehindi</b>	Dec 2014
• Cleared 1st level and participated in the 2nd round of the Advance level of the Concours d'Orthographe 2014.	
French Olympiad (National Level)   <b>French Embassy in India</b>	Dec 2013
• Awarded a medal by the Embassy of France in India for being one of the top 3 rankers in my school.	

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## Relevant Courses

Coursework   <b>IIT Roorkee</b>	B. Tech 2017 - 2021
• Applied Optics (PHN-212)	
• Semiconductor Devices (PHN-312)	
• Engineering Analysis & Design (PHN-205)	
Electives   <b>IIT Roorkee</b>	B. Tech 2017 - 2021
• Optical Communication Systems (PHN-731)	
• Fiber and Non-Linear Optics (PHN-608)	
• Innovation, Entrepreneurship and Business Models (IBM-308)	
• Optoelectronics (PHN-427)	
• Photonic Sensors (PHN-735)	
• Semiconductor Microelectronic Technology (PHN-724)	