



Ajay Kumar
Civil Engineering
Indian Institute of Technology Bombay
Specialization: Remote Sensing

193040018
M.Tech.
Male
DOB: 12/05/1994

Examination	University	Institute	Year	CPI / %
Post-Graduation	IIT Bombay	IIT Bombay	2021	7.82
Graduation	M.D.U	M.E.R.I	2019	62.02
Undergraduate Specialization: Civil Engineering				

ACADEMIC CREDENTIALS AND ACHIEVEMENTS

- ❖ Achieved **96.07** percentile, out of the **145064** students who appeared in GATE '19 (Civil Engineering).
- ❖ Secured First Class B. Tech. Degree through the examination conducted by Maharshi Dayanand University, Rohtak.
- ❖ Secured Third Place in Annual Inter-college Techno Fest-2017.

MASTERS' THESIS & SEMINAR

		<i>August '20-Present</i>
Masters' Thesis Title	: MASS BALANCE ESTIMATION USING GEODETIC METHOD IN CENTRAL HIMALAYAS	
Guide	: Prof. J. Indu	
Co-Guide	: Prof. Gulab Singh	
Objective	: To assess the health of a glacier, Geodetic mass balance method was most acceptable method. Accurate Digital Elevation Models (DEMs) plays an important role in mass balance estimation.	
		<i>Jan '20 – June '20</i>
Seminar Title	: ESTIMATION OF GLACIER MASS BALANCE USING THE ELA APPROACH	
Guide	: Prof. Raaj Ramsankaran	
Objective	: Review of study on quantification of annual glacier surface mass balance for the Chota Shigri Glacier, Western Himalayas, India using an Equilibrium-Line-Altitude (ELA) based approach.	

RELEVANT EXPERIENCE

		<i>(Oct-Nov '20)</i>
Course Project Title	: Supervised Land Cover Classification Using The Spectral Angle Mapper Algorithm	
Guide	: Prof. J. Indu	
Objective	<ul style="list-style-type: none"> • Five Bands of Landsat 8 was used to classify land cover in 5 classes (water body, vegetation, Urban area, Bare land, Rock mass) • Angle between pixel values and training data were calculated using MATLAB. • The Land Cover class was assigned based on the least Angle, calculated using MATLAB. 	
		<i>(Oct – Nov '19)</i>
Course Project Title	: Determination of NDSI Kalpa Glacier, Himachal Pradesh.	
Guide	: Prof. Eshwer Rajashekar	
Objective	<ul style="list-style-type: none"> • Using 22 Landsat images download From USGS. • Using ArcGIS and Erdas Imagine Software for image processing 	
		<i>May 2020</i>
Course Project Title	: Glacier Mass change study in the Himalaya	
Guide	: Prof. Gulab Singh (CSRE)	
Objective	<ul style="list-style-type: none"> : SAR image processing for Digital Elevation Model. : Glacier surface elevation change retrieval and precise mass change estimation : Automated extraction of ablation and accumulation using machine learning algorithms and ArcGIS for determining penetration depth estimation and correction. 	
		<i>(July – Dec '19)</i>
Course Project Title	: Developed land use land cover maps of Bangalore city.	
Objective	<ul style="list-style-type: none"> • Change detection matrices and performed directional analysis • Determine the direction of spread of the city using ArcGIS. 	
		<i>(Jan – June '20)</i>
Course Project Title	: Finding Most probable value using Total Station	
Objective	<ul style="list-style-type: none"> : To find most probable value of angles measured at one station : Instruments used : Total station, Arrow, Ranging rod, Plumbing bob, Measuring tape 	
		<i>(Jan – June '20)</i>
Course Project Title	: Elevation and sectional view of Security building IIT Bombay using Terrestrial laser scanner (TLS)	
Objective	: To obtain plan, elevation and sectional view of Security building	
Course Project Title	: Creating Contour Map	
Objective	: Creating Contour Map Using the GPS field data and Total Station data over Sameer Hill IIT Bombay	

TOTAL EXPERIENCE

(27th Jan - 26th May 2018)

Institution Name : **Delhi Development Authority (DDA), New Delhi, India**
Title : **Study of Construction of 1568DUs /Cat-2: 312 (2-BHK) + 288 (1-BHK) and 968 EWS Multi-storied composite Houses and Electrification.**
Experience gained in

- Structural and Architectural Drawings.
- Basic work of RCC Structure at site.
- Manufacturing of Structural Pre-casting components like Columns, Slabs and Beams.

Institution Name : **Delhi Development Authority (DDA), New Delhi, India** (June – July 2017)
Title : **Study of Multistoried two bedroom Apartments including internal Electrifications.**
Experience gained in

- Worked with junior engineer and suggest relevant technical inputs which are necessary for the better running of the project and Studied the basic work of RCC structure at site.

SITE VISITS

- ❖ Visited NRSC (ISRO) Shadnagar and Jeedimetla Campuses, Hyderabad. (Nov'19)
- ❖ Visited Parbati-2 HEP Dam, Himachal Pradesh. (Sept'17)
- ❖ Visited Sewage Treatment Plant (5.0 MLD) Jhajjar Haryana. (Dec'16)
- ❖ Visited India Bulls construction Pvt Ltd. Rathdhana, Sonipat. (Dec'16)

NOTABLE COURSES

Relevant courses attended:

- Applied Statistics
- Geographical Information Systems in Civil Engineering
- Remote Sensing Technology
- Digital Image Processing of Remotely Sensed Data
- Photogrammetric Engineering
- Communication skills
- Remote Sensing Laboratory
- Advanced Surveying
- Data Processing in Remote Sensing
- RS and GIS Applications to Cryosphere
- Philosophy of Education

Software Proficiency:

- MATLAB
- SNAP
- MS Excel
- Adobe - After Effects
- ArcGIS
- Tableau
- Filmora
- Photo-Shop
- Auto CAD
- ERDAS Imagine
- Power Direct
- Revit Structure
- MS Office
- Adobe - Primer Pro

INSTRUMENTAL EXPOSURE

Theodolite, Tripod, Prismatic Compass, Ranging rods, Measuring tapes, Cross-staff with stand, Pegs, Auto level, Leveling Staff, Total station, Ranging rods, Prism with stand, Arrows, GNSS, GPS, TLS, Automatic Level.

CERTIFICATIONS

- ❖ Completed the course Data Science A-Z: Real-Life Data Science Exercises(COURSERA) (June'20)
- ❖ Completed the course COVID-19 Contact Tracing Authorized by Johns Hopkins University. (June'20)
- ❖ Completed Training in AUTOCAD (2D+3D) and got A+ Grade(e-CAD Tech) (Aug-Sept'17)
- ❖ Completed Training in REVIT STRUCTURE and got A Grade (e-CAD Tech) (Aug-Sept'17)
- ❖ Completed the course: Engg. : Undergraduate & Masters Asia Virtual Experience Program. (Aug'20)

POSITIONS OF RESPONSIBILITY

Photographic Coordinator | PG Sports Council | IIT-Bombay (Sept '19-May '20)

- Selected through the rigorous process based on SOP interview among 20+ candidates.
- Worked in a team of 20 coordinators for coverage of 15+ sports competition amongst 22 departments.
- Assisted in conducting "Lock & Rock" | Online sports quiz | sponsored by KS Deodorant.
- Responsible for all the sports photographs during 15+ sports competition Post-graduate Sports Council for 6000+ students.

Photographic Convener | PG Sports Council | IIT-Bombay (May '20- present)

- Responsible for all the sports events photographs and videos organized by PG sports council for 6000+ students.
- Organized virtual freshman orientation during online semester catering to over 500+PG students and providing gifts and goodies, Sponsored by LENOVO
- Leading a team of 21 Department Sport Secretaries, 10+ Events Coordinators and 3 photographic Coordinators.
- Conducted Orientation day for 1000+ freshmen gathering.

EXTRA CURRICULAR ACTIVITIES/ACHIEVEMENTS

- Awarded as a **PG Sports Commendation** for the contribution towards PG sports council
- Secured Third Place in Annual Inter-college Techno Fest-2017.

SPORTS		OTHER HOBIES	
• Gold in Intra-hostel volleyball Tournament.	• Represented Civil Department in PGGC Kho Kho	• Cricket	• Basket Ball
• Represented Civil Department in PGGC Basketball.	• Participated in intra hostel cricket team	• Gymnastics	• Volleyball
		• Pool	• Kho Kho
		• Music	• Movies