

Ayush Aggarwal

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EDUCATIONAL QUALIFICATIONS

| Year | Degree | Institute / School | CPI/% |
|------|---|----------------------------|-------------------------------|
| 2016 | Dual Degree - M. Tech. (Geo-informatics) + B. Tech. (Civil) | IIT Kanpur | PG – 7.8/10.0 UG – 6.9/10.0 |
| 2011 | Class XII (CBSE) | Delhi Public School Meerut | 91% |
| 2009 | Class X (CBSE) | Delhi Public School Meerut | 91% |

WORK EXPERIENCE

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|--|-------------------------------------|------------------|
| Company – Prismberry Technologies, Noida | Role – Senior Data Scientist | Jan 2019 – Going |
| <ul style="list-style-type: none">Leading team on data science and engineering application working on performing data mining from multiple data sources including Extract, Transform, Load (ETL) and ML automation for analysisHands-on experience from scratch to build machine learning model using deep learning concepts, architecture setup in the big data context (100+ GB) and deriving business insights using tableau dashboardWorked with stakeholders to create A/B test requirements and success metrics Used - Airflow, Kafka, Google Cloud, Docker, Python, Pandas, PySpark, Selenium, Scikit, Keras, Big Query, Tableau | | |

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|---|---|----------------------|
| Company – Sky Map Global, Hyderabad / Singapore | Role – Senior Research and Technology Engineer | July 2017 – Oct 2018 |
| <ul style="list-style-type: none">Implemented sentimental analysis of client emails using Word2Vec, Scikit, Keras (LSTM) and Google Cloud ML EngineDeployed visualization of analysed IOT dataset using D3 chart, Google Map, Vue.js, Flask, POSTGIS and PostgreSQLCreated model using Python, Keras (CNN), Planet API and Google Earth Engine for Augmented Reality IOS Application and was featured in Geospatial World Forum 2018Worked on chat bot feature using NLP, Socket.IO and Google Cloud and sped up user interactionAnalysed vehicle routing problem (carpooling) using optimisation tool, Google Map API, and python (Singapore Project) Conducted technical training sessions , supervised interns, hiring and collaborated with 3 teams for development of products Completed specialization courses on Google Map API and Data Engineering on Google Cloud Platform [Certificate] | | |

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|---|---------------------------------|----------------------|
| Company – Practo Technologies, Bangalore | Role – Software Engineer | Sept 2016 – Jun 2017 |
| <ul style="list-style-type: none">Developed API in Ray V7 Product to improve its query optimisation using SQL to reduce processing timeCreated online portal for calculating Doctor's Churn of Ray product for analyst team using MySQL and Periscope DataDeployed app to track travelled places end to end on AWS [GitHub] Used - Laravel, PHP, Doctrine, MySQL, NG Map, Amazon EC2, Git, New Relic, MVC pattern | | |

TECHNICAL SKILLS

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|--------------------------------|--|
| Programming | Proficient - Python, JavaScript, SQL, Git Intermediate - Swift, PHP |
| Product Development | Proficient - Vue.js, Flask, POSTGIS, PostgreSQL, MySQL Intermediate - Express, Laravel, Geoserver, Arkit, Web GL (Cesium), Selenium |
| Data Engineering | Proficient - Google Cloud, Big Query Intermediate – Airflow, Docker, Kafka, Amazon EC2 |
| Data Science | Proficient - Pandas, Scikit, Dc, D3 chart, Tableau Intermediate - Keras (CNN and LSTM), PySpark |
| Geospatial Technologies | Proficient - Google Map API, Planet API, Google Earth Engine, Mapbox, QGIS, GPS, ArcGIS, OSM |

RELEVANT COURSES DONE

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|--|----------------------------|------------------------|--------------------------------|-----------|
| Financial Engineering | Probability and Statistics | Social Media Analytics | Partial Differential Equations | Economics |
| Machine Processing of Remotely Sensed Data | Geospatial Data Processing | Systems Analysis | Linear Algebra | |

ACADEMICS RESEARCH PROJECTS

Spatial prediction for landslides using machine learning models (M.Tech. Thesis) | Aug 2015 – July 2016

- Study the **machine learning techniques** in Python for **spatial prediction** of event useful for hazard, crime, and marketing
 - Investigations revealed that factors affecting **landslide risk** prediction are slope, distance from road, river and other landslides
- Used**
- Python, Scikit, GDAL, Pandas, OSM (Open street maps), ArcGIS

RELEVANT CERTIFIED COURSES (Coursera)

Geospatial Intelligence | 94.1% - With Distinction | Pennsylvania State University | Jan 2015 – Mar 2015

Analyzed Application of **geospatial technologies and spatial analysis** methods including buffers, viewshed and routing

Other courses in **GPS to Spatial Computing, Image and video processing, Designing Cities and Maps and Geospatial revolution**

INTERNSHIP EXPERIENCE

University - **Leibniz University Hannover, Germany** | Project - **Kinect v2 Map Visualization** [[GitHub](#)] | May 2015 - Jul 2015

Investigated and created the interface in globe view and street panorama using **Web GL, Kinect model, C# and Visual Studio**

Researched what kind of gestures and interactions like speech and screen capturing are meaningful for map tasks

Company - **Transerve Technologies, Goa** | Project - **SmartMU (GIS technology)** [[Application](#)] | May 2014 - Jul 2014

Managed **geospatial and tax data** for map application for **analysing tax collecting patterns for municipality**

Compared performances geographically and timely of shops with reports and graphs as hyperlocal information system

Company - **OYO Rooms / Oravel, Delhi** | Project - **Graphic and Web Design** | May 2013 - Jul 2013

Initiated new process to engage users based on **gamification principles** to gain better insight of **consumer behaviour**

Developed website and newsletters for **holiday rentals**

ACADEMICS KEY PROJECTS

Network Analysis of Research Community | Mar 2015 - Apr 2015

- Utilized **professor's web pages** and **research papers** to help build a **multidisciplinary culture** of research in different fields
- Applied **network queries** and **social media analytics** concepts in **Python** for noise generation, file cleaning and data comparison

Target Detection with Hyperspectral Imagery | Jan 2015 - Feb 2015

- Conducted the development, analysis, and application of sub-pixel target detection algorithms in **hyperspectral imaging data**
- Targeted water and house in **Delhi and Himalayan region** by statistical, physical, and heuristic approach in **Matlab**

Examined object-based image analysis (OBIA) of remote sensing data | Aug 2014 - Nov 2014

- Looked into the development and its implications by various methods and models to classify and analyse **IIT Kanpur Image data**
- Investigated **applications** based on it such as habitat fragmentation and intelligent image enhancement

SCHOLASTIC ACHIEVEMENTS

- Secured **2nd position** among 10 teams in **Google Developer Hackathon**, Goa for analysis of **real-time data** on social sites in 2014
- Attained All India Rank (AIR) **1919** in **IIT-JEE** (percentile 99.6) and **685** rank among **85000** students in **IIST** in 2011
- Recipient of prestigious **KVPY scholarship**, awarded to top 125 young scientists & leaders across country by DST in 2010
- Awarded certificates of merit for **outstanding performance** in academics in 8th, 9th and 10th class
- Presented **two games** under guidance of teacher in **Visual Studio** in 8th standard.
- Scored **4/6** in International Test of English Proficiency (**ITEP**) showing skill level as High Intermediate

POSITIONS OF RESPONSIBILITY

Professional Assistant for Geographical Information System course, IIT Kanpur | Aug 2015 – Apr 2016

- Devised study plans for **conducting labs** with initiation of **MATLAB tutorials** to help undergraduate students

Representative of Society of Civil Engineers (SOCE), IIT Kanpur | Aug 2012 - Apr 2013

- Led team of 10 student representative responsible for the **Civil Engineering activities** consisting of about **500** students

EXTRA-CURRICULAR ACTIVITIES

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|-------------------|---|
| Managerial | Increased involvement of alumni with Institute as part of Alumni Contact Program (ACP) of 2012 summer |
| Creative | Produced video film showing school students opinion about change in selection process at IITs in 2012 |
| Cultural | Performed dance in departmental fresher and dance extravaganza, 2011 |
| Sport | Participated in Taekwondo and Volleyball , received 1st prize in intra college Volleyball competition in 2011 |
| Volunteer | Design, test and publish new web pages in compliance with WhoAmI NGO work in 2015 |