

# Ayush Aggarwal

Website: <https://www.ayushaggarwal.in/> (22K+ Views), [Quora Answers](#): 292K+ Views

Blog: <https://ayushaggar.wordpress.com> (28K+ Views), GitHub: <https://github.com/ayushaggar>

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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

Company - <b>Locus, Bengaluru</b>   Role – <b>Technical Lead [Platform Team - Cloud Mlops Architect]</b>   Sept 2021 - Going		
<ul style="list-style-type: none"><li>Leading end to end <b>Data Engineering and MLOps solutions</b> to translate structured and unstructured data for ML insights using order, shipping and consumer data for cross functional teams</li></ul>		
Company - <b>Qyuki Digital Media, Mumbai</b>   Role - <b>Senior Machine Learning Engineer</b>   Nov 2019 - Aug 2021		
<ul style="list-style-type: none"><li>Architecting and building complex <b>business solutions</b> that help internal stakeholders with <b>talent assessment</b>, brand affinity, identify patterns, advertisement optimization, development for strategy setting and decision making</li><li>Develop Big Query ML models to gain deep insights into <b>consumer behavior</b> and prescribe actions to improve artist-focused content personalization, consumer engagement and social commerce products monetization</li><li>Support exploration of new technologies, <b>digital media trends</b> and experimental methods to identify growth opportunities</li><li>Business Automation using <b>multimedia data</b> ingestion, discovery, processing, <b>network modeling</b> and <b>delivery dashboards</b></li><li><b>WhatsApp Bot</b> for Shopify stores having user conversation in English, Hindi and Hinglish</li><li>Analyzing and <b>forecasting demand</b>, optimizing unit economics, geographic/territory targeting and <b>tracking</b> consumption</li><li>Applied <b>network queries</b> and <b>social media analytics</b> concepts for noise generation, file cleaning and data comparison</li><li>Agile based product development for machine learning oriented applications focusing on <b>team deliverables</b></li><li><b>Used</b> - Python, Flask, Google Cloud, Docker, Confluence, Jira, Twilio, Swagger, API Gateway<ul style="list-style-type: none"><li><b>Data Engineering</b>: Kafka, Jenkins   <b>Data API</b>: YouTube, Facebook Graph, Shopify, Shiprocket, Zoom, Google Analytics</li><li><b>Databases</b>: MongoDB, Big Query, Elasticsearch   <b>Data Science</b>: Pandas, PySpark, Scikit, Keras, Tableau, Dialog Flow,</li><li><b>Research keywords</b>: NLP, Object Detection, Time Series Analysis, Topic Modeling, Sentiment Analysis, TF-IDF</li></ul></li></ul>		
Company - <b>Prismberry Technologies, Noida</b>   Role - <b>Senior Data Scientist</b>   Jan 2019 - Oct 2019		
<ul style="list-style-type: none"><li>Defining <b>Cloud and DevOps roadmap</b> to manage service for IOT data ingestion of about 300+GB with 99.5 % uptime</li><li>Reduction in <b>Infrastructure cost</b> and virtual machine footprint by 34% after implementing <b>microservices</b> and improved latency and throughput using auto scale ingestion</li><li>Improved experience by <b>calculating metric</b> of different pipelines keeping ingestion and data access API separately</li><li>Maintaining Log monitoring, load testing, <b>alerting and playback system</b> of data ingestion</li><li>Resolved <b>operational issues</b> concerning Dataops infrastructure - databases, data pipelines, data warehouses and storage</li><li><b>Leading team</b> on data science and engineering application building ETL and ML automation platform that drives business</li><li>Built <b>prediction</b> model for <b>identifying SKUs</b> at risk, for cross-sell and up-sell in retail store leading to annual benefit</li><li>Hands-on experience from scratch to build machine learning model and <b>deriving business insights</b> using tableau dashboard, A/B test requirements and metrics</li><li><b>Used</b> - Python, Flask, Azure and Google Cloud, H3 Uber's Spatial Index, Selenium<ul style="list-style-type: none"><li><b>Data Engineering</b>: Kafka, Jenkins, IOT Hub, Locust, Docker, Image Registry, Kubernetes, Airflow, Geoserver</li><li><b>Databases</b>: Cassandra, Kairos DB, Azure SQL, Big Query   <b>Data Science</b>: Pandas, Scikit, Keras, PySpark, Tableau</li><li><b>Research keywords</b>: Regression, Time series analysis, Clustering, Linear Mixture Model</li></ul></li></ul>		
Company - <b>Self</b>   Role - <b>Freelance Consultant</b>   Jun 2017 - Going		
<ul style="list-style-type: none"><li><b>Online Coach and Consultant</b> specialized in Geoinformatics, Data Science and Development for Students<ul style="list-style-type: none"><li><b>Consulted</b> around <b>100+ Students</b> and Parents [<a href="#">Website</a> - 22K+ Views, <a href="#">Blog</a> - 28K+ Views, <a href="#">Quora Answers</a> - 292K Views]</li><li><b>Volunteer</b> - Design and publish web pages in compliance with <b>WhoAmI NGO</b></li><li><b>Survey Collection</b> and <b>Spatial Web Visualisation</b> in 6 languages using GIS, Kobocollect, Geonode</li></ul></li><li><b>Google Cloud Certified</b> - Google Map API and Data Engineering on Google Cloud Platform [<a href="#">Certificate</a>]</li><li><b>Certified Courses</b> - Geospatial Intelligence, GPS to Spatial Computing, Image and Video Processing, Maps Revolution</li><li><b>Machine Learning projects</b> –</li></ul>		

- [ML Trips Microservice](#) - Docker, Flask, ETL, Analytics, S2Geometry, MongoDB, Nginx, Unittest, Pyarrow
- [MLOps Model Deployment](#) - RNN model, Docker, Neu.ro, Locust Testing
- [E-Commerce Object Detection](#) - Tensorflow Serving, Keras, Flask, Docker, R-CNN Model **[Computer Vision]**
- [Fraud Transaction Detection](#) | [Spell Correction Application](#) | [Twitter Post Virality Rank](#) **[Fuzzy Model]**
- [Customer Transaction Prediction](#) | [Topic Identification](#) - LDA Model **[NLP]** | [Spatial Urban Area Analysis](#) - DBSCAN Model

Company - **Sky Map Global, Hyderabad / Singapore** | Role - **Senior Research and Technology Engineer** | July 2017 - Oct 2018

- Developed **Building detection** using OpenCV, Python, Flask, Docker, Google Static Map
- Implemented **sentimental analysis** of client emails using Spacy, Word2Vec, Scikit, **Keras (LSTM)** and Google Cloud ML Engine
- Deployed **visualization** of analysed datasets using **D3 chart**, Kepler.gl, **Google Map**, Vue.js, Flask, **PostGIS** and PostgreSQL
- Created model using Python, **Keras (CNN)**, Planet API for **Augmented Reality** featured in **Geospatial World Forum 2018**
- Analysed **vehicle routing problem** (carpooling) using optimisation tool, Google Map API, and python (**Singapore Project**)
- Conducted **technical trainings**, supervised interns, hiring and **collaborated** with 3 teams for development of products
- Research collaboration with **Academic and Industry** leaders for using **deep learning concepts** and **architecture setup** in the **big data context** (100+ GB)

Company - **Practo Technologies, Bangalore** | Role - **Software Engineer** | Sept 2016 - Jun 2017

- Developed API in **Ray V7 Product** to improve its query optimisation using SQL to reduce **processing time**
- Created **online portal** for **calculating Doctor's Churn** of Ray product for analyst team using MySQL and Periscope Data
- Deployed 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

<b>Programming</b>	<b>Proficient</b> - Python, JavaScript, SQL, Git   <b>Intermediate</b> - Golang, PHP
<b>Product Development</b>	<b>Proficient</b> - Flask, PostGIS, PostgreSQL, MySQL, MongoDB, KairosDB, Cassandra, Big Query <b>Intermediate</b> - Express, Laravel, Geoserver, Arkit, Web GL (Cesium), Selenium, Locust
<b>Data Engineering</b>	<b>Proficient</b> - Docker, Google and Azure Cloud, Jenkins, Kafka   <b>Intermediate</b> - Airflow, Kubernetes
<b>Data Science</b>	<b>Proficient</b> - Pandas, Scikit, D3 chart, Tableau   <b>Intermediate</b> - Keras (CNN and LSTM), Tensorflow
<b>Geospatial Technologies</b>	<b>Proficient</b> - Google Map API, Planet API, Google Earth Engine, GDAL, QGIS, Kepler.gl, ArcGIS, OSM
<b>Machine Learning</b>	<b>Proficient</b> - NLP, Classification, Regression, Feature Engineering, Data Scraping, Clustering

## RELEVANT COURSES DONE

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

*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

## INTERNSHIP EXPERIENCE

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

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

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

## SCHOLASTIC ACHIEVEMENTS

- Secured **2<sup>nd</sup> 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