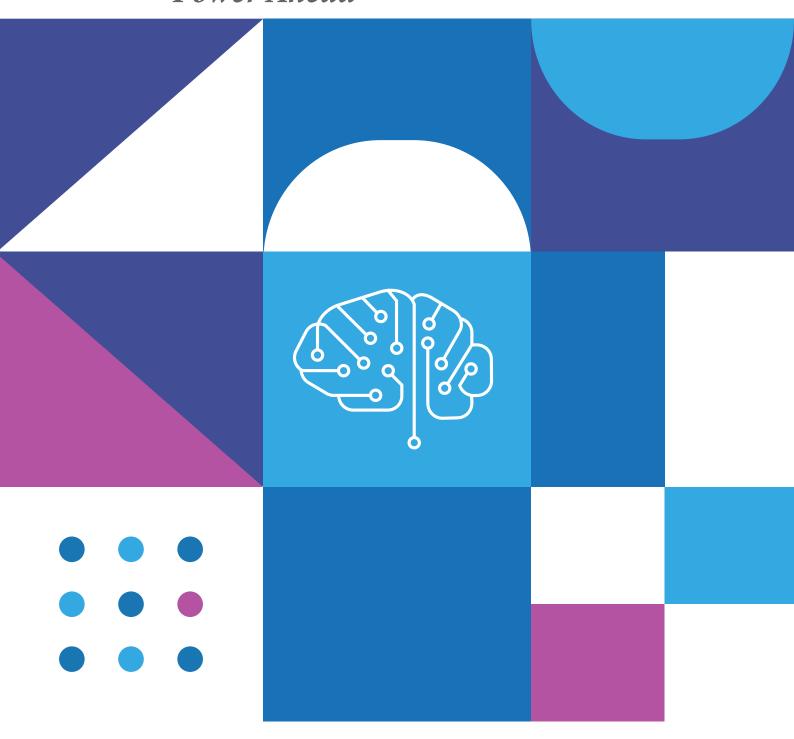
### greatlearning Power Ahead



## ARTIFICIAL INTELLIGENCE & DATA SCIENCE

CAREER GUIDE

AI | MACHINE LEARNING | DATA SCIENCE & ANALYTICS

# **AI**CAREER GUIDE

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# DATA SCIENCE AND ANALYTICS CAREER GUIDE

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### INTRODUCTION

Data has garnered a great deal of attention over the past decade and is being considered as the new oil because it's extremely valuable to organisational success. This data economy with its vast reservoir of vital information is pushing for innovations in Data Science, Artificial Intelligence, Machine Learning, and <a href="Deep Learning">Deep Learning</a> technologies. Machines are learning from data to derive patterns and insights to aid various applications and processes.

### APPLICATIONS OF ARTIFICIAL INTELLIGENCE

With the fast-paced advancements in the field of Artificial Intelligence and related technologies, one can witness Al applications being used in their routine lives. Automated customer support systems, chatbots, and personalized shopping experience with product recommendations are a common example of this.

With smart autonomous cars driving on roads and autonomous drones delivering items directly to doorsteps, a great deal of transportation and service issues will be resolved effectively. Companies like Walmart and <a href="Mailto:Amazon">Amazon</a> are investing heavily in making the drone delivery a reality and an efficient system of delivering goods faster and safely.

The creative fields are also adopting AI as a means of exploring new ideas in art and music in this technologically advanced era. Other applications of AI can be witnessed in the new-age Security and Surveillance systems where technologies like image processing, data science, facial recognition, and voice recognition are helping security forces to develop better systems to identify and act upon security breaches, many a time before they actually happen.



### INDUSTRY APPLICATIONS

### OF AI

### Healthcare

Al technologies are being developed to help medical institutions to streamline clinical as well as administrative healthcare processes. Accenture analyzed the <u>Al applications in healthcare</u> in terms of estimated potential annual benefits by application by 2026. Here is what the study established:

### ROBOT-ASSISTED SURGERY \$40B VIRTUAL NURSING ASSISTANTS \$20B ADMINISTRATIVE WORKFLOW ASSISTANTS \$18B FRAUD DETECTION \$17B DOSAGE ERROR DETECTION \$16B CONNECTED MACHINES \$14B CLINICAL TRIAL PARTICIPANT IDENTIFIER \$13B PRELIMINARY DIAGNOSIS \$5B **AUTOMATED IMAGE DIAGNOSIS** \$3B CYBERSECURITY \$2B

Source: Forbes Insights - Al And Healthcare: A Giant Opportunity



### **Entertainment**

Today media and <u>entertainment</u> companies are training ML algorithms to design advertisements and develop film trailers. Personalized user experience is given a lot of importance with streaming channels that recommend content based on specific user activity and behaviour.

Artificial Intelligence softwares are improving the speed and efficiency of the media production process and the ability to organize visual assets. Many gaming platforms are also adopting new technologies to bring more interactive gaming experience. Sports shows maximum affinity towards using Artificial Intelligence for game preparation and real-time analysis of the on-field action.



### **Banking and Finance**



Applications of Artificial Intelligence in Banking and Finance are set to revolutionize the industry and bring it up to a more secure and sophisticated platform. All is being used to detect anti-money laundering patterns, which is much more efficient than the traditional rule-based software systems.

Talking about Algorithmic trading, reports suggest that automated AI systems are behind more than 70% of the trading today. One of the fields where AI has proved to provide the most accurate and superior results is 'Fraud Detection'. Apart from the regulatory and legal aspects, banks and financial institutions are using chatbots and virtual assistants to provide better customer service than ever.



### Marketing

Al-generated content is big news among the content-generating and aggregating agencies and professionals. Smart content curation allows better engagement with visitors on a website by showing content pieces relevant to them. Another aspect is Voice Search which is set to change the future SEO strategies. Brands need to keep up and leverage huge returns on organic traffic with high purchase intent.



Marketing automation, programmatic media buying, propensity modelling, predictive analytics, and lead scoring are other applications where AI can leverage better results. Some Machine Learning algorithms can run through a vast amount of historical data to draw insights on the ads which performed best, audience targeted for the same, and buying stage.

Al is also helping in evolving the concept of dynamic pricing, web and app personalization, chatbots, and re-targeting, some of the marketing aspects directed towards conversion.

### Retail and e-commerce

Image search is a very important application of Artificial Intelligence for e-commerce. It makes it so much easier for shoppers to search products similar to a product image across sellers online. All is also deriving sense and insights out of the massive amount of data generated by the minute.

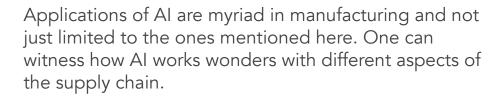
Product recommendations, <u>Chatbots</u>, and efficient after-sales services backed by AI are directed towards high customer satisfaction, engagement, and finally, loyalty. AI is also helping retail brands manage their inventories, improve their CRM, and develop a better sales process.



### Manufacturing

Smart factories are primarily driven by AI concepts and technologies taking active measures for increased productivity, environment friendliness, and quality of life at these intensive workplaces. Artificial Intelligence is being applied for quality checks, maintenance, and creating more reliable designs and layouts for the plant and its processes.

Apart from that, it is also reducing environmental impact by applying methods of cutting down waste and using the resources optimally. An example of this is demonstrated by Siemens, where hundreds of sensors feed an AI operating data processing system to adjust fuel valves to keep emissions as low as possible.





The outcome of these applications and the general acceptability of these technologies can be seen in the form of increased job opportunities and new work domains. This has created a necessity to learn new skills and move from the older redundant roles to the new high paying jobs, given one acquires the required skillset and subject matter knowledge.

There are opportunities to upskill and move horizontally and vertically into the organizations across industries making a career which is highly rewarding and relevant to this age and time. With sophisticated skills and continuous learning, employees can deem themselves irreplaceable and make a strong position for themselves in the job market as a highly preferred resource.

The myth that AI will eat up jobs is being constantly proven wrong by these innovative solutions and applications of Artificial Intelligence. The jobs will surely be displaced by leaving some roles redundant, but a lot more opportunities will open up demanding an upskilled workforce.



### CAREER OPPORTUNITIES

It would not be wrong to state that Artificial Intelligence has picked up the pace to reach its prime, and is going to see an upward graph over the coming years. The career opportunities likewise are growing.

The challenge is that the supply of skilled resources in Artificial Intelligence lags behind the demand substantially. These are the jobs that have been vacant for a stretch of 12 months straight. This gap showcases a huge opportunity and promising career prospects for mid and senior-level professionals across industries.

23,000



Al Jobs created in Bangalore alone

\$415 million



Indian AI industry has also doubled in size with revenues of \$415 million in 2019

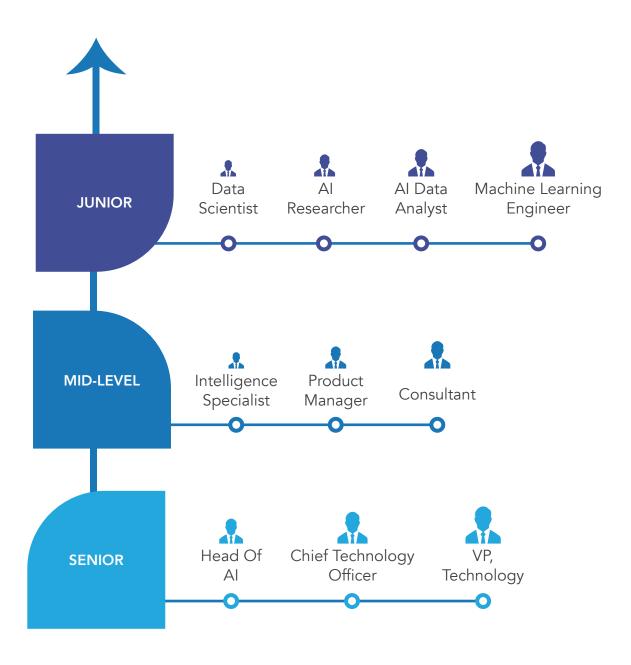
Source: LiveMint 2019

You can enter into the field of Artificial Intelligence and pursue a career in the same by following these five steps:

- Understand the AI career landscape
- Research and list out popular job roles in the field of AI and evaluate which suits you best
- Understand the education and knowledge pre-requisites to pursue your chosen job role
- Enrol to top online or offline <u>resources</u> and institutions to learn from
- Start with the job hunt to land your dream job



# **CAREER GRAPH** FOR AI PROFESSIONALS





### SALARY OF ML ENGINEERS



The average salary for a Machine Learning Engineer in India is

₹6.91 LPA

Source: Payscale

### MACHINE LEARNING ENGINEER SALARY



An entry-level Machine Learning Engineer with <1 year experience



An early career Machine Learning Engineer with 1-4 years of experience

Average total compensation (includes tips, bonus, and overtime pay) in INR

Source: Payscale



# SAMPLE JOB DESCRIPTIONS

#### **ML ENGINEER**

A Machine Learning engineer works on designing and developing ML and deep learning systems. They work on running various ML tests and experiments. And also on implementing appropriate ML algorithms.

#### RESPONSIBILITIES

- Transforming Data Science prototypes
- Designing ML systems
- Researching and implementing ML algorithms and tools
- Developing ML applications
- Selecting the most appropriate datasets and data representation methods
- Running ML tests
- Performing statistical analysis and fine-tuning
- Training ML models when necessary

### **QUALIFICATIONS AND SKILLS**

- Adequate knowledge about different ML algorithms, libraries and tools
- Ability to write robust codes in Python, R
- Understanding data structures and data modeling
- Proven experience as a ML Engineer or a similar role
- Analytical and problem solving skills

### SALARY OF AN AI SPECIALIST



The average salary for an Artificial Intelligence (AI) Specialist with Artificial Intelligence (AI) skills in India is

₹7.3 LPA

### AI SPECIALIST SALARY



An entry-level AI professional with 1-4 years experience

Average total compensation (includes tips, bonus, and overtime pay) in INR.



## SAMPLE JOB DESCRIPTIONS

#### AI SPECIALIST

An AI Specialist can mean a number of various things. They can work as a software engineer, a research analyst, a Java developer and they work towards enhancing operations within a number of industries.

#### RESPONSIBILITIES

- They are responsible for designing, undertaking and analysing information
- Must specialize in a few areas of development, such as networks, operating systems, databases or applications
- Al Specialists are capable of handling many aspects of developing an application, including but not limited to performance, scalability, security, testing
- They help to safeguard organization's computer networks and systems
- Pay a key role in the design, installation, testing and maintenance of software system

#### **SKILLS**

- Strong background in programming languages
- Knowledge of System analysis
- Familiarity with Python, C++ and R
- Working knowledge in a similar field or role



### **INDUSTRIES** HIRING FOR AI



tops the race among industries that are massively hiring for these Al roles.

**2.5L** 

new jobs in 2019 in India by IT industry.

Source:"IT hiring projections for 2019" by TeamLease

Other industries that are most likely to adopt AI and Machine Learning solutions and hence create job opportunities for experts are:



Manufacturing & Supply Chain



Financial services



Healthcare



Education



Consumer & Retail



Public & utility services



Agriculture



Telecom

The top 10 organizations which offered most numbers of job opportunities in the year 2020 were:



GRAPHCORE

















Source: Analytics Insight



### REQUIRED **SKILLS**

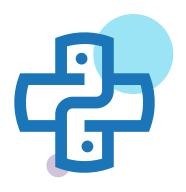
The top skills that employers seek in AI professionals are Natural Language Processing, Machine Learning, Neural Networks, Cloud Computing, Data Science, Analytics, and Pattern Recognition among others.

While the technical skills on your <u>resume</u> will surely land a good job in Artificial Intelligence, you cannot ignore the supporting written and verbal communication skills that are needed to convey how the AI tools and services are deployed within the business or industrial processes.

Professionals are required to be hands-on with the following tools, techniques, and programming languages:

### **Python**

Object-Oriented Programming, Python is a very useful and robust programming language that focuses on RAD (Rapid Application Development). The ever-changing libraries are the reason that it is an ideal choice for developers working on Al projects.



The benefits of using Python are:



Prebuilt Libraries



Minimal Coding



Platform Agnostic



Flexibility



#### Java

This programming language derives a major part of its syntax from C and C++. It is fast, powerful, and secure along with easier debugging. Java is architecture-neutral and hence portable with no implementation-dependent aspects of a specification. The multi-threading feature makes it possible for a program to perform various tasks simultaneously.

#### The benefits of using Java are:



Scalability



Better User Interaction



Platform Agnostic



Large-scale Projects

#### R

Considered as a Statistical Software, R is specialized for statistics, data visualization, and data analytics with graphical tools. It has effective data handling and storage facility and runs on all platforms, being easily ported to another platform. A common application is in monitoring user experience in Social Media.



### The benefits of using Python are:



Open Source & Free



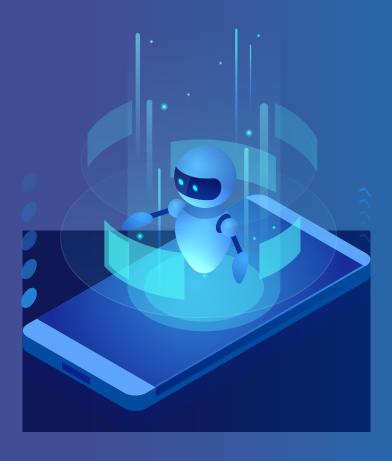
Can Connect With Other Languages



Advanced Visualizations

Other tools and techniques which are also important are Hadoop, Data Mining, Spark, and SAS.





### ABOUT THE PROGRAM

### PG Program in Artificial Intelligence and Machine Learning

Offered in Collaboration with:





Learn skills that make you job ready and build a rewarding career

- India's #1 AI Program
- 12 Months | Online Learning
- Personalised Mentorship
- Delivered in collaboration with The University of Texas at Austin
- Deep Learning Module by IIT-B faculty
- Dedicated Career Support



### **PGP - Machine Learning**

Offered in Collaboration with:





Learn skills that make you job ready and build a rewarding career

- Personalised weekly online mentorship sessions
- 7-month Program
- 160+ hours of learning
- Dedicated career support through interview workshops and 1:1 mentorship
- Access to GL Excelerate curated jobs portal and exclusive career fairs
- Individual doubt-solving with expert mentors
- 20+ practical case studies guided by industry experts





### **SUCCESS** STORIES



**Dr. Shrishail Gajbhar**Assistant Professor
Walchand Institute of
Technology, Solapur
PGP-AIML Alumnus

My program experience with the Great Learning team so far has been extremely good. I felt like I was on the right path while working towards changing my career goals. Right from the first interaction until now, the support by the Great Learning team has been beyond great. Their course faculty is best in class and their course content has been aptly designed — considering both pedagogical approach and industry requirements. What pulled me in completely was their focus on machine learning concepts and its implementation rather than just mathematical rigour. The mentoring sessions also turned out to be very insightful. Overall, it's been a great experience of learning AIML concepts at Great Learning. I would definitely recommend it to every future aspirant.

The mentor support was really great. My mentor, Krishnav, was very dedicated throughout the course. He went out of his way to ensure that all the learners would understand the concepts well. He was never frustrated with me even though I was a slow learner and ensured that I was clear about the concepts taught.



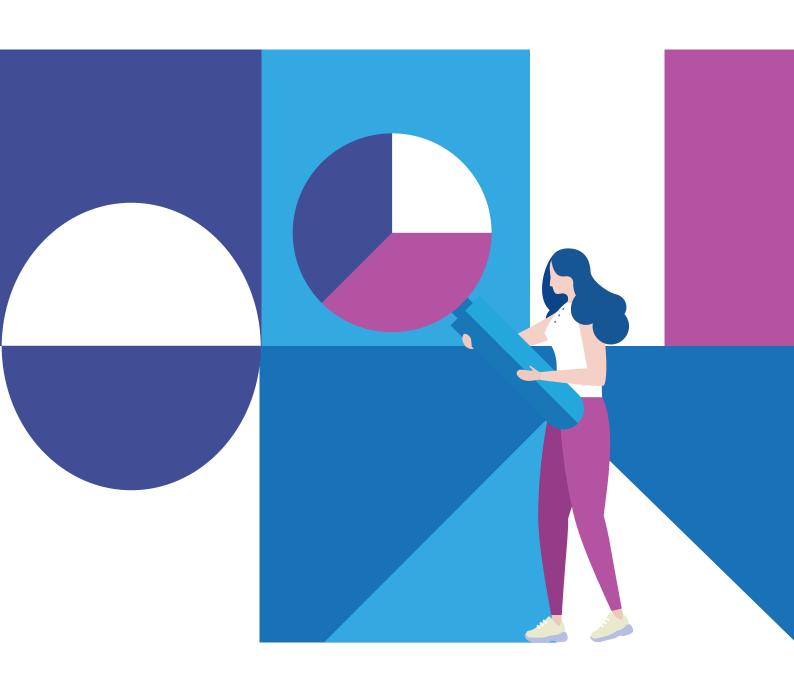
Premkumar Gunasekaran DGM & development Cognizant PGP-AIML Alumnus



Manish Kumar Senior Engineer Tata Consulting Engineers Limited PGP-AIML Alumnus

The learning experience with the Great Learning team has been extremely smooth and amazing so far. The program is very well structured and the course content covers both theoretical and industrial application aspects. The curriculum also provided us with challenging projects and exercises that helped gain first-hand industry experiences. Moreover, it was also extremely helpful in gaining confidence for my future profession.

# SECTION 2 DATA SCIENCE AND ANALYTICS





### WHAT IS ANALYTICS?

Business Analytics combines business intelligence, data science and programming to form a data driven approach towards building businesses and improving market performance. This iterative model helps companies understand and scale their business through statistical analysis. Apart from analysing market performance it also helps companies draft business plans by deriving insights from past business data. Owing to its ability to predict business behavior and patterns, business analytics has become an indispensable part of any decision making process in big companies.

Business analytics can be divided into three broad categories - descriptive analytics, predictive analytics and prescriptive analytics. Each of these categories facilitates business management by tracking complex databases and measuring impact.



### DESCRIPTIVE ANALYTICS

Aims at summarizing the findings of any data analytics - complex databases are broken down into coherent information pieces which help business leaders to understand performance and impact of any business decision.



### PREDICTIVE ANALYTICS

Uses data analytics to set future expectations in business environments. It uses historic data to understand business behaviour.



### PRESCRIPTIVE ANALYTICS

Influences business decisions directly by providing future solutions. This predicts future outcomes. Most businesses heavily depend on prescriptive analysis to drive success and establish future goals.



# WHY ANALYTICS IS IMPORTANT IN BUSINESS

The advent of technologies such as cloud computing make data collection and management easier. Naturally, businesses today are data obsessed, making business analytics relevant for all industries - whether it is banking or healthcare industry. Business analytics leverages data to identify complex patterns, relations and possible impact. Since all inferences are powered by data, the margin of error is significantly less and it allows companies to invest in future goals.

If businesses understand their customers, half the battle is won - this is exactly where Business Analytics chips in. Business analytics tries to identify consumer behaviour by collecting data on consumer conversion rates, demographics, interaction patterns and more. These data sets need to be presented in comprehensible formats for everyone to understand. Once the data is collated into charts and graphs, it becomes easier to 'read'. Managers and decision makers can refer to these reports to understand their business performance. It enables businesses to meet their customer demands and expectations as business forecasting is more accurate with robust analytics.



Competitor research is important for any business to stay ahead in the game. Business analytics plays a major role in helping companies to achieve that. Businesses can collect and analyse competitor data and understand the trends of the market. Competitor research is crucial not just for business planning but also for understanding consumer psyche. Understanding competitor success or failure is the perfect way to plan business growth - either by replicating the successful models or by eradicating the failed models. Business analytics makes this easier for companies by decoding the models and setting measurable future goals.

The market today is as competitive as it is extensive. Businesses need to find, if need be create and engage in sales opportunities. Business analytics applications ensure that companies can do that in a fail-proof manner. Sales and marketing teams can refer to BA reports to create personalized consumer profiles and improve consumer relationship management.



# MAJOR INDUSTRIES USING ANALYTICS



Data generation and documentation has grown manifold in recent years. Analytics has become crucial for businesses to record and understand this data. While most kinds of industries need analytics, for some it is indispensable as it impacts their bottom-line directly. The following industries are highly data dependent and apply analytics to optimise functionality.



#### RETAIL

Industries which are consumer facing (B2C) such as <u>retail</u> can benefit from business analytics in many ways. Data on consumer demographics, spending habits and more can be analysed to forecast product success or plan business models. Analysts can also look into the performance of products to predict its future. Similarly, business analytics can help companies prepare for a spike in demand and sales for any particular product. Be it inventory or competition, business analytics enable retail businesses to understand the market and deliver accordingly.



#### **MARKETING**



The marketing industry depends heavily on business analytics - from researching market trends to improving customer loyalty, marketing leverages BA to identify and target customer needs and demands. Analytics makes a marketer's job easy by quantifying the needs. Once the market trends are realized, markets can create campaigns to address that. If BA's role is important during the preparatory phase, it becomes even more crucial after the campaigns have gone live. Marketers can improve the impact of any marketing strategy by tracking its performance once it reaches its audience as marketing strategies can be optimised and monitored based on BA reports.



### **BANKING & FINANCE**

Finance is one of the primary industries where business analytics plays a vital role. From monitoring stock markets to analysing economic indicators, business analysts help clients make data driven investment decisions and improve their business portfolio. Banking industry also benefits equally from business analytics as BA reports are crucial to understand customer demographics and needs. These reports can be used to craft more consumer centric solutions which answer customer needs perfectly while reducing risks and costs.





#### **EDUCATION**



The Education industry might be late in joining the digitization of data, but it is quickly catching up. With the rise of pursuing niche skills and specialization courses, it becomes important to design courses that prepare students for future roles. Business analytics can be applied to understand student profiles and create programs to optimise learning. Since a lot of freshers and professionals are eager to pick up analytics skills, BA experts are also getting hired to teach analytics and share industry insights with students. Either way, the demand for analysts is quite high in education industry.

### **ENGINEERING**

Both <u>software</u> and <u>hardware engineering</u> industries depend on data analytics to derive accurate performance reports. BA reports can help IT and hardware industries to optimise resources, analyse performance, and predict market success. Whether it is detecting a fault in a device component or improving operations, collecting and analysing data helps in creating productive plans.





# CAREER OPPORTUNITIES IN ANALYTICS



### NUMBER OF JOBS

54,000+

vacant Data Analytics jobs in India in 2020.

Source: Naukri.com

### BUSINESS ANALYST SALARY

Salaries may vary depending on a number of factors such as work experience, job role, job location and hiring company.

The average salary for a Business Analyst in India is ₹6,07,486.



An early career Business Analyst, IT with 1-4 years of experience

Average total compensation (includes tips, bonus, and overtime pay) in INR.

Source: Payscale



### ANALYTICS PROFILES

### **Operations Manager**

<u>Business Analysts</u> can work as operations managers, taking care of the operational functions, gauging performance, analysing business needs and more. Their analytical skills will help them provide businesses with solutions that are powered by data.

#### **Product Owner**

Business analysts can be successful product owners and use analytics to monitor quality, performance, and success of the products. If you are an analyst who has a background in technical studies, then venturing out as a product owner can be a natural progression for you.

### **Management Consultant**

Professionals with BA certifications can start working in consultancies and work their way up with experiences into roles like management consultants. A background in analytics will help in understanding the market and predicting business needs.

### **Business Architect**

Another natural career path for BA experts is to become a business architect. Business architects help companies plan and strategies their business goals. Given the nature of this job, BA skills match the requirement perfectly. Professionals with a background in BA will be able to align business goals properly and help companies grow.



### BUSINESS ANALYST JOB DESCRIPTION

A business analyst will assist with the implementation of business information systems across departments. They will work on identifying any problems or opportunities within a company and provide recommendations to achieve business goals. They conduct market research and analyze product lines as well as overall profitability of the business.



#### RESPONSIBILITIES

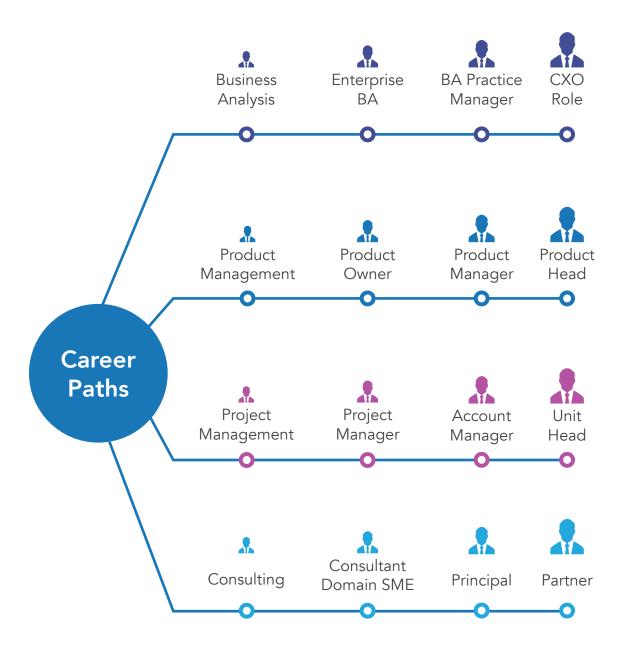
- Creating detailed business analysis and outlining various problems, opportunities, and solutions
- Budgeting and Forecasting
- Financial Modelling
- Pricing
- Reporting
- Define business objectives and requirements. Report them to stakeholders Variance analysis

### **SKILLS**

- Business Administration degree or equivalent Knowledge of management
- Information Technology
- Strong communication skills
- Experience working with senior management
- Proven analytical skills or background
- Advanced excel skills
- Programming skills such as SQL, SAS



# CAREER PATHS FOR DATA PROFESSIONALS



### REQUIRED SKILLS



### **Data Analysis**

Managing huge data sets and examining through complex patterns is part of every analyst's job. You have to be diligent in handling and analysing complex databases for report making. These reports eventually help business leaders draw conclusions and arrive at decisions. Hence, understanding the organizational dataflow and using it effectively is important for BA.

### **Problem Solving**

Business analysts depend primarily on data to drive business goals, but they also need to be adept in conceptual thinking to reach those goals. After all, BA doesn't stop at identifying problems, but at solving them. If analysis is one half of the job, the other is crafting solutions with the company goals in mind.

### **Business Acumen**

Business acumen is a top skill required in analysts. It is essential to understand company goals, business plans, and the concerned industry in order to be able to plan business growth. Having a sound knowledge of your company's business model will help you in planning strategic growth and analyse performance.

### **Programming Knowledge**

BA professionals need to have a commanding knowledge of the programming languages like Python, R and more which are specifically designed for querying- like SQL. Even practical knowledge of off-the-shelf analytical softwares like Qlik, Tableau etc. can come in handy.

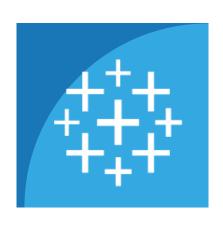
#### **Detail Oriented**

For a BA expert, the devil is in the details. You must look closely and run a thorough analysis of every dataset to understand the pain-points or recognize the successful models.

While the technical skills can be acquired through certifications and educational training, there are few personal skills like communication, self-discipline and more that professionals must cultivate and hone over time.

### **POPULAR TOOLS**

# FOR ANALYTICS PROFESSIONALS



#### **Tableau**

Tableau is one of the most convenient tools for BA. It can analyse any kind of data source, be it web-based data, corporate data, Warehouse or Microsoft to create maps, dashboards and charts that have real-time references. Tableau makes it easier for users to share these reports across various channels internally or externally. This is a powerful tool that can handle huge datasets and is ideal for large scale businesses.

### **R Programming**

If you need to understand the scope of data interpretation, this is the perfect tool to use. R programming can be used to manipulate data to understand its scope and present it in various ways. Its capacity to handle huge dataset and deliver accurate results has made it a favourite among analysts. It can be run on a range of platforms like Windows, MacOS, and UNIX. Flexibility and versatility make R a dependable tool for data modelling.



# 4

### **Python**

Python is a very popular scripting language. Since it's a free open source tool that is easy to write, read, and maintain, it can support both functional and structured programming methods. It can also be easily assembled on platforms like JSON, SQL, or MongoDB. Owing to its easy adaptability, Python is one of the most used analytical tools for large corporations. If you have knowledge of Ruby or Javascript, you can pick up Python in no time.





### SAS

Developed in the 1960s, SAS has evolved over time to become one of the most prominent analytical tools out there. Owing to its easy maintenance and accessibility, SAS is widely used to analyse customer facing channels. SAS has a number of modules for analysing customer intelligence, marketing and social media analytics which can be used to predict social behaviours, market interactions, and product prospects.

### **Apache Spark**

Apache Spark is one of the fastest emerging analytical tools suited for large-scale data processing. It is the best option for data science concepts and machine learning models. It works really fast in Hadoop clusters- upto 100 times faster in memory and 10 times faster on disk. BA professionals looking to use Spark can also access a progressive set of machine learning algorithms for repetitive analytics.





### Excel

It all begins and ends with Excel. It is the most basic yet an extremely potent tool for analysts. In fact, Excel cannot be substituted with any of the aforementioned analytical tools. It can be used to summarise analytical reports and present them in a comprehensible manner for easy interpretations. Various excel features also come in handy for user-based presentation for both managers and clients.

# CASE STUDIES FROM DIFFERENT INDUSTRIES

### Predictive Analysis In Insurance

Deloitte helped one of the largest insurance providers to arrive at successful business decisions by using analytics to understand and predict market performance. Though the insurance industry is generating massive amounts of data with each passing day, using that data towards business ends is tedious and needs dedicated resources. Deloitte used advanced technology to gather and analyze data from personal fitness devices to draw inferences on consumer lifestyles, likely behaviour, company risks and more. Since this data was sourced from across 170 countries around the world, the inferences were really exhaustive. The insurance provider in question was able to build new products based on these new findings and also improve their customer journey. The analytics driven insights are helping the company to improve pricing, control costs, and cross sell products successfully.

### Data-backed Support In Retail

Under Armour, one of America's most popular sports apparel and footwear brands, uses business analytics to provide users with real-time, data-based coaching for fitness and health benefits. This cognitive coaching system draws heavily from business analytics reports to consider user profile, geospatial details to understand various parameters that may affect the process. This data driven approach towards designing their fitness products has earned them excellent ratings apart from sales growth by 51%.

### Analytics For Scaling Lodging

Airbnb, one of the most profitable enterprises in the lodging industry depends heavily on business analytics to grow their business. BA reports have helped Airbnb to understand their consumers better and present their products better. The company found that consumers are more likely to engage with their listings if they have sufficient multimedia files to support the claim and redesigned their catalogue accordingly. They have experienced a 43 percent growth in five years which clearly shows how business analytics has steadfastly increased their sales.

# SCOPE OF ANALYTICS IN THE FUTURE

The way in which the use and generation of data is increasing, it's only natural that the upcoming years will see a surge in the demand for business analysts. Success of IT sectors in the last couple of decades in the country following a vast expansion of the industry has resulted in the rise of data analytics. Experts believe that India will emerge as a world leader in the analytics market. Multinational companies will be outsourcing analytical projects to India.

The current market is already absorbing highly skilled business analytics professionals for all kinds of analytics profile. With companies like Accenture, IBM, Deloitte and others stepping into the game, business analytics has become a much sought after career path. Be it for cyber security or monetizing data, analytics will play a crucial role in securing data platforms in the near future. Cognitive analytics will also continue to grow as will open source solutions. With that in mind, it's safe to say BA experts will be among the highest paid professionals in the country.



# DATA SCIENCE AND ANALYTICS COURSES

### Post Graduate Program in Data Science and Engineering

Offered in Collaboration with:



Designed Exclusively for Freshers and Early Career Professionals

- 9-Month Program
- Live Online Learning
- Designed for freshers and early career professionals
- · Comprehensive curriculum and hands-on learning
- World class faculty
- Industry oriented Capstone Project
- PG Certificate from Great Lakes #1 Ranked in Analytics Education
- Aptitude skill training and development
- Resume building and mock interview sessions
- Placement drives with India's leading companies



### M.Tech (Big Data Analytics) Specialization in Data Science and Machine Learning

Offered in Collaboration with:



Learn skills that make you job ready and build a rewarding career

- 2-year program
- Weekly classroom sessions from Mon-Thu
- 6-month internship
- M.Tech Thesis
- Placement assistance

#### **LEARN MORE**

### M.Tech (CSE) Specialization in Data Science and Machine Learning

Offered in Collaboration with:



Learn skills that make you job ready and build a rewarding career

- 2-year program
- Fortnightly classroom sessions on Sat-Sun
- Capstone project
- M.Tech Thesis
- Career support GL Excelerate



### IIIT Hyderabad: PG Certificate in Software Engineering in Data Science

Offered in Collaboration with:



Learn skills that make you job ready and build a rewarding career

- 8-month program
- Blended learning online + on-campus residencies
- Ranked #6 India's best research institution in Computer Science -CSrankings
- AAAA+ Outstanding ran in All India Technical Colleges
- Capstone project
- Career support GL Excelerate

#### **LEARN MORE**

### **MS in Data Science Program**

Offered in Collaboration with:

Northwestern

SCHOOL OF PROFESSIONAL STUDIES

Learn skills that make you job ready and build a rewarding career

- MS degree from Northwestern University
- Online, part-time learning mode
- 18-month program
- Hands-on learning with assignment and project work.
- Dedicated career support: Placements, 1:1 career guidance
- Fee payable in six quarterly installments of \$3,667 each



### SUCCESS STORIES



**Aishwarya Sarda**Business Analyst, Uber
PGP-DSE Alum

After completing around 4 and a half months of the program, I had applied for Uber. The knowledge that I gained through the course really helped to crack the interview. This program is ideal for anyone who is looking for a transition into the field of Data Science. The curriculum is very well designed and the placement support is really good.

PGP-DSE is a top-notch program for students aspiring to make a career in the field of data science. The program has a well-designed course-content and structure and is taught by the best faculty who made us think outside the box constantly. After the completion of the program the assistance provided by the placement team was impeccable, they guided us at every step from the interview preparation to confidently cracking the interviews. Joining Great Lakes was the biggest milestone in my career.



Sai Ramya Machavarapu
Business Analyst,
Mercedes-Benz
PGP-DSE Alum



Shawrya Sharma
Associate Consultant,
KPMG
PGP-DSE Alum

If you are sincere and perform well during the program, you will definitely land a job in a good company. I can say that the mock interviews, career fairs, and CV reviews were quite helpful and played a major role in my transition. I had an opportunity to be interviewed by 3 companies from which, I was offered roles by two companies.

### ABOUT **Great Learning**

Great Learning is one of India's leading professional learning companies focused on upskilling working professionals and students. It offers comprehensive, industry-relevant programs in Software Engineering, Business Management, Business Analytics, Data Science, Machine Learning, Artificial Intelligence, Cloud Computing, Cyber Security, Digital Marketing, Design Thinking, and more.

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and are constantly reimagined and revamped to address the dynamic needs of the industry.

Great Learning is the only ed-tech company to provide these programs in a blended mode, classroom mode and in purely online mode, relying on its vast network of expert mentors and highly qualified faculty to deliver an unmatched learning experience for learners in India and the world over.

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