



Elective No. 4

Banking, Finance, Services & Insurance Domain

Domain Specialization & Project Expertise



Domain Specialization elective :

In Banking, Finance, Services & Insurance

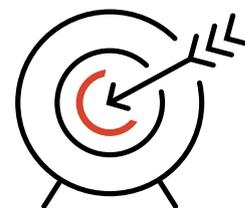
- ✓ Learn how to succeed in an increasingly competitive market with advanced tools and technology by using proven methodology.
- ✓ Master your data analysis skills and create a dynamic dashboard to describe your insights
- ✓ Develop leadership skills by gaining a better knowledge of data and making more informed choices regarding prospects, customers, product lines, market opportunities, and team performance.



6 Industry
Relevant Projects



20+ Case Studies &
Assignments



100% Interview
Guarantee



Elective Details

The fields of data science and artificial intelligence use a wide range of approaches, including statistical analysis, modelling, machine learning, and data mining, to help us forecast the future.



Who should join?

- Executive-level BFSI professionals or consultants, dreaming of securing a position at the forefront of BFSI Domain practices to add value to both their career and organization.
- Managers and leaders associated with BFSI who want to incorporate future proof and data-driven newfangled practices into the existing business operations.



Why domain specialization?

- Data science skill efficacy is all about using your domain-specific knowledge in a balanced way using data-driven methods.
- As a result, if you don't have domain expertise, your data science abilities are useless.
- Even so, these are the main reasons why experienced workers seeking career changes are in greater demand.

Course Pre - requisite:

Professionals having **1+ year of experience** in BFSI domain. Or **non-BFSI professionals interested in learning** about the newest technology, data science, artificial intelligence, data analyst and business analyst techniques that drives strategic development.

NO background in programming or statistics required.

Tools & Modules

TERM 1 & 2



Python



Statistics



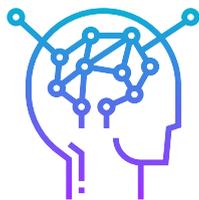
Machine Learning



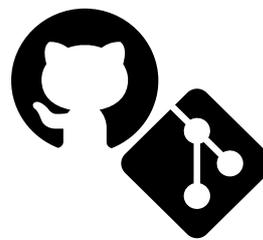
Deep Learning (Tensorflow)



Time Series Analysis & Forecasting



Natural Language Processing



Git & GitHub



R Programming

TERM 3 & 4



SQL for Data Science



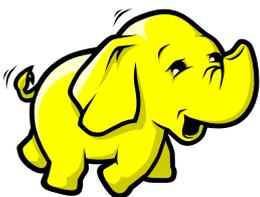
Tableau



Power BI



Mongo DB



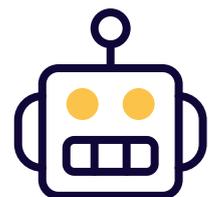
Hadoop



Apache Spark



Google Cloud



Advance AI

Transition Process

100% Job Referral Guarantee

Work on Real Time Projects and **Domain Specific** Capstone project

Job Preparation (Resume Build- Up, Mock Interview, Job Referrals)

Analyze your knowledge and interest towards any 2 domain from **Domain Electives**

Complete **General Program** (Term 1 to 4) Core + Advance Modules & Tools

[Main Brochure](#)



What will you learn?

With new applications being developed all the time, banking is in a state of constant change.

Data science is everywhere in banking. As a result of the financial crisis of 2008, the face of the banking sector has been quickly changing.

In the world of information technology, banks were early adopters for both procedures and security. Banks are becoming bigger, and client loyalty is poor, which implies consumers demand more operational efficiency. Banks want to understand their clients better and keep them on their books. The analytics team is focused on trends found in the data to better interact with customers and better comprehend transactional data

- The elective covers several banking and finance data analysis tools and ideas, but its emphasis is on practical applications and implementations.
- It explains decision analytics in a manner that non-mathematicians and everyday statistical data analysis experts may easily comprehend.
- Ready-to-use practical analytical tools are imparted to students who take this module.

Domain Specialization
In BFS Domain



Project Life Cycle Expertise
with 2 Capstone Projects

Domain Training

Module 1 - Introduction to Banking Finance & Insurance Domain

In this Introductory session, you will learn the basic banking sector information.

We'll be looking at several financial organizations and the many different kinds of financial services they offer to their customers.

To understand how a bank produces return, we may look at a bank's balance sheet and income statement.

We will conclude with a brief overview of several career options in banking.

Module 2 - Financial Institutions and their Services

- Types of Financial institutions
- Organization of Financial Institutions
- Universal Banks, Large Banks, Investment Banks, Community Banks, Online Banks, Credit Unions, Cooperative Banks
- Banking Services, Retail Banking, private Banking, Business Banking, Commercial Banking, Corporate Banking, Investment Banking

Module 3 - How returns are generated in Financial Institutions?

- Bank's Balance Sheet, Income Statement, Net Interest Income, Components of total revenue.
- Measuring returns in a bank, The impact of Leverage, The importance of Operating Efficiency, Asset Liability Matching and Securitization

Module 4 - Managing customer data, Customer segmentation and Real-time and predictive analytics

Here we will learn how Machine Learning and Analytics can be useful to counter a shrinking customer base by trying a number of different retention techniques with significant results.

With this one will be able to predict which currently active customers are likely to reduce their business with banks which in turn may reduce the churn percentage.

Module 5 - Process Automation, Security

This module will help you understand in identifying "high net worth or potential" prospects and customers, Improve the ability to target products and services to prospects or customers, Maximise the specific elements of the offer (product, pricing, channel) and allow senior management to make informed operational decisions.

Module 6 - Fraud detection, Underwriting and credit scoring and Risk modeling for investment banks

The Analytics in this module will help you to understand how banks identify right customers for lending, monitor collections, predict and reduce delinquencies and reduce NPA and increase profitability.

Capstone Projects

Loan Default Prediction

Banking Domain



The bank wants to improve their services by finding interesting groups of clients. Fortunately, the bank stores data about their clients, the accounts (transactions within several months), the loans already granted, the credit cards issued.

This process of loan default prediction can be done with machine learning algorithms.

Identify Fraudulent credit card transactions

Banking Domain



To recognize fraudulent credit card transactions so that customers are not charged for items that they did not purchase.

It involves various processes like Data Cleaning, Data Visualization, Insights generation, Model generation, Feature Engineering and so on.

Claims Prediction

Insurance Domain



The insurance industry is particularly interested in future forecasting. Accurate forecasting allows the organization to minimize financial losses.

For this, insurers employ quite complicated procedures. A decision tree, a random forest, a binary logistic regression, and a support vector machine are the main models.

In this example, a large number of different variables are being investigated. The methods include recognition of claims-to-claims relationships, high-dimensionality implementation to reach all levels, and detection of missing observations, among other things. The portfolio of each individual consumer is created in this manner.

Forecasting future claims enables insurers to set competitive premiums that are neither too high nor too cheap. It also assists in the development of pricing models.

This allows the insurance firm to stay ahead of the competition.

Forecasting Insurance Pricing

Insurance Domain



Insurance firms should collect a higher premium than the amount paid to the insured person in order to generate a profit.

As a result, insurance firms devote a significant amount of time, effort, and resources to developing models that properly estimate health-care costs.

Analysing Risk in Finance Industry



Finance Domain

One of the most important fields of data science and business intelligence in finance is risk analytics. Risk analytics and management allow a corporation to make strategic decisions while also increasing its trustworthiness and security.

While classic organized data can always be accommodated in spreadsheets, more complex data is not. Institutions can benefit from this type of big data in a variety of ways.

A corporation might be exposed to a variety of dangers. Competitors, credit, the market, and other factors all contribute to these risks.

Identifying, monitoring, and prioritizing risks are the most important elements in risk management.

There is an abundance of data, such as client information and financial transactions.

As a result, the institutions use this type of data to improve risk scoring models and save expenses.

Verifying the creditworthiness of consumers is another crucial part of risk management.

Algorithmic Trading



Finance Domain

- The most significant aspect of financial institutions is algorithmic trading.
- Complex mathematical formulas and lightning-fast computations are used in algorithmic trading to assist financial firms in developing new trading strategies.
- The data used in algorithmic trading is made up of huge data streams that are measured and described using a model.
- The analytical engine's goal is to better analyse the large datasets and generate forecasts for the future market.

+ Can I select multiple domain electives?

- You can select multiple electives based on your career goal and work experience/academics.

+ What if I don't have any prior experience in any domain?

- Even if you don't have any prior experience, you can still opt for any elective to gain Domain Expertise and work on Real - Time Industrial Projects.

+ Can I change my domain electives later ?

- Yes, you can change your elective or repeat the training later within the Course Accessibility Duration.

+ Are there any additional charges for electives?

- No, there are no additional/ hidden charges.

+ How many capstone projects do I need to work?

- You can work on all projects, or depending on your experience and goal. For eg, Having 1-2 yrs of experience you must work on 4-5 projects.

Note: We keep updating trending projects and case - studies as per the market/company requirement. You can also Bring your own project.



Stay updated with newest content (Infographics, Interview Q&A, Job Updates and more) on Data Science and AI.



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