



Pexitics.com
People excellence indicator **Analytics**

Data Science | online JUNIORS



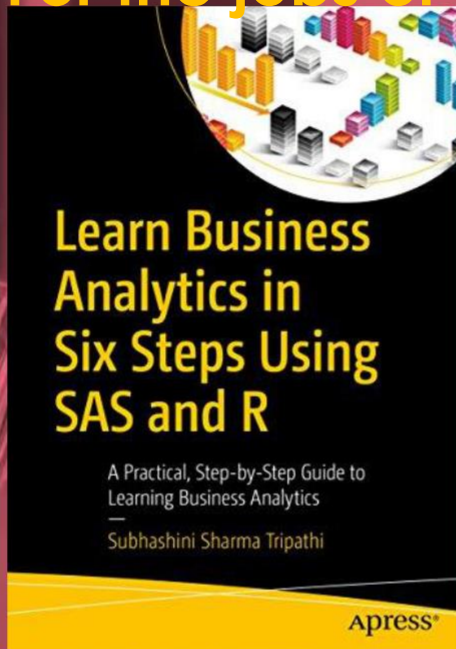
Excel SaaS | Python Coding †

maths machine

analytics learning
data
management



Learning today.
For the jobs of tomorrow.



Artificial
Intelligence

Data Machine
Science Learning

Analytics





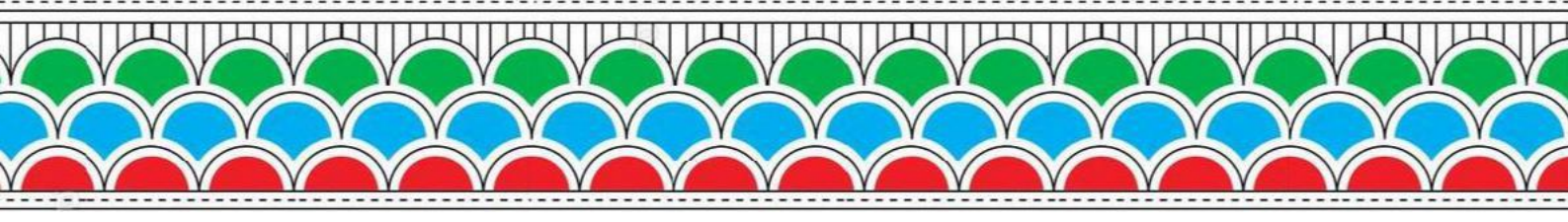
“ Every Olympian gets 4 years to practice...comfortably

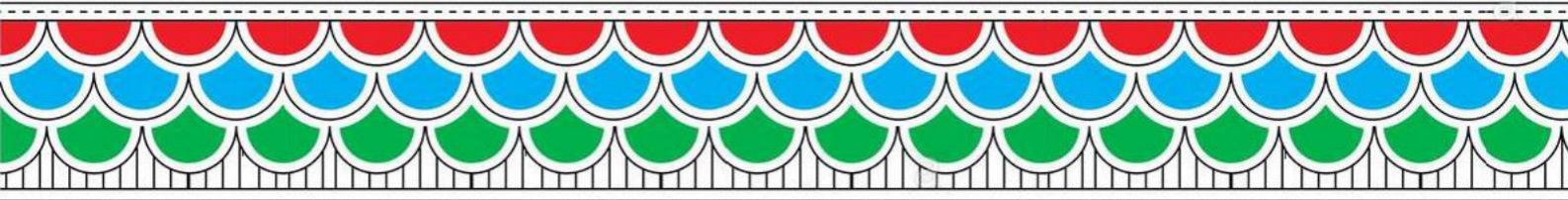
We want to inculcate in the children the ability to interpret and learn at a happy pace. This ensures that they develop a deeper interest and love for data and its utility as a part of our future. For us at Pexitics, ***this is a labour of love with our own children who are part of this interesting journey.***

The idea is not to push out children like a factory, but generate intense curiosity and learning for the child to lead the future of tomorrow through graded and combinatory learning techniques. This will ensure that they also stand to excel at data-related subjects like maths with ease even for the school syllabus. We urge you to view this learning intervention as **Applied Mathematics**.

Secondly, today we are seeing the emergence of Analytics and Data Science specialisations being offered at the Bachelors level for subjects such as commerce. This highlights the importance Analytics carries today and for the future generation of jobs and careers. Subjects like Pharmaceuticals, Medicine, Finance, Manufacturing, Retail & Hospitality are joining the ranks of Engineering and Analytics led industries like Aviation and Technology.

We are talking about your children learning Analytics with ours !!





Value



Prescriptive Analytics

Recommends action.

Optimisation
Random Testing

Predictive Analytics

Forecasts to predict.

Predictive Modelling
Statistical Modelling

Diagnostic Analytics

Expands the cause.

Data Discovery
Data Query

Descriptive Analytics

Explains the information.

Data Visualisation
Data Reporting

Year VI

Advanced Predictive & Prescriptive Analytics

Year V

Associative Stats and Basic Predictive Analytics

Year IV

Hypothesis testing and Differences Stats

Year III

Advanced Visualisation & Inferential Stats

Year II

Intro to Visualisation & Descriptive Stats

Year I

Numbers and the World - Basics

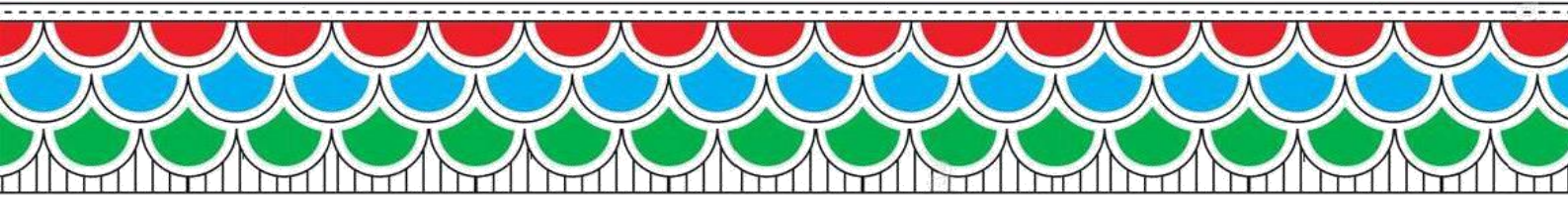
DATA



Complexity

**Certify your children starting from ages 10+
for only ₹15000/semester**

(Each semester is of 4 months and 12 assured classes per semester)



Year I | 3 Sem / 4 months: 2 hrs/week class + 2 hrs/week self-study

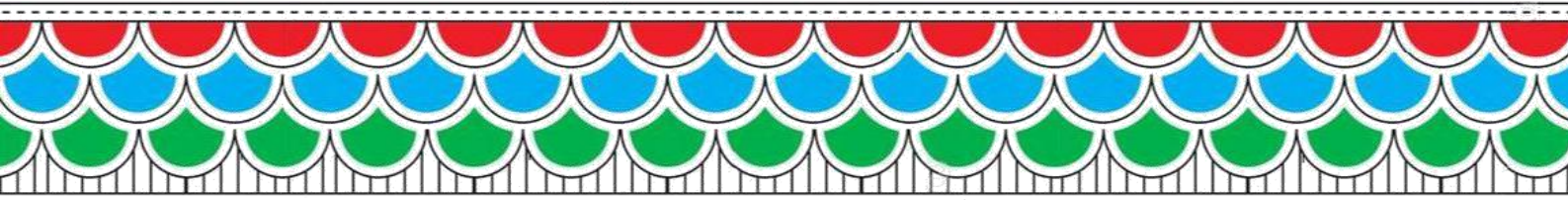
Sem I	Week 1-3	Week 4-6	Week 7-9	Week 10-12
Theory	1. Dimensions and measurements 2. Number line 3. Decimals 4. Metric system	Comparisons and Relative positions (Numbers, Visualisation, Algebra) 1. With other objects/ data 2. Over periods of time	Relationships (Numbers, Visualisation, Algebra) With other objects/ data Over periods of time	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem II	Numbers and the world			
Theory	1. Multiples 2. Common Multiples 3. Lowest Common Multiples	1. Factors , Prime Factorisation 2. Highest Common factors 3. Composite numbers	1. Prime numbers (co, twin) , odds and even numbers 2. Divisibility rules (numbers 1 - 20)	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem III	Numbers and the world-Coding			
Theory	1. Introduction to data 2. Recording of data for Business Introduction to basic data recording systems 3. Understanding Profit and Loss	1. Boolean data type _ understanding comp language 2. Standard Data Types: Numbers. String. List. Tuple. Dictionary	Variable Assignment Variable Types in Python Object References Object Identity Variable Names	Case Study and Practical Case studies End of Semester Assessment and Results
Excel				
Python				

Year II | 3 Sem / 4 months: 2 hrs/week class + 2.5 hrs/week self-study

Sem I	Week 1-3	Week 4-6	Week 7-9	Week 10-12
Theory	Revision : Types of Numbers, Fractions, Decimals, Metric system, LCM, HCF, Profit and Loss	Basics of tables 1. Frequency table 2. Relative , Cumulative Frequency 3. Calculating counts, sum etc.	Basics of Graphs and Charts : 1. Pie chart 2. Bar Graph 3. Line Chart	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem II	Intro to Visualisation & Descriptive Stats			
Theory	Basics of Graphs and Charts _ advanced and comparisons : 1. Pie chart 2. Bar Graph 3. Line Chart	Theory of Visualisation Advanced Graphs and Charts : 1. Scatter plot 2. Heat Map 3. Sunburst charts	Basics of Descriptive statistics : Introduction to Sample Central Tendency : Mean , Median, Mode	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem III	Intro to Visualisation & Descriptive Stats			
Theory	Basics of Descriptive statistics : Distribution of Data : Min, Max, Quartile (Q1, Q2, Q3, Q4), Standard Deviation, Variance Shape: Normal Distribution. Others : Bernoulli Distribution. Uniform Distribution. Binomial Distribution. Poisson Distribution. Exponential Distribution	Statistical Graphs : 1. Histogram 2. Density plot 3. Box and whisker	Identifying Data Outliers Interpretation and Writing comments on outputs	Case Study and Practical Case studies End of Semester Assessment and Results
Excel				
Python				

Confident of moving to the next sem?

Take the assessment and move to the next semester. easy peasy!









Year III | 3 Sem / 4 months: 2.5 hrs/week class + 3 hrs/week self-study


Sem I	Week 1-3	Week 4-6	Week 7-9	Week 10-12
Theory	Revision : Tables, Graphs & Charts, Descriptive statistics	Introduction to Dashboard Uses in Business Creating a Dashboard	Introduction to Storyboard Uses in Business Creating a Storyboard	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem II	Advanced Visualisation & Inferential Stats			
Theory	Introduction to Probability Events , Frequency based Probability Types of Probability Working with Probabilities ; Venn diagrams	Conditional Probability Decision Trees	Dependent, Independent, Marginal Probability Business application of Probability	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem III	Advanced Visualisation & Inferential Stats			
Theory	Bayes Theorem Conditional Probability Discrete Probability	Continuous Probability Normal Distributions and Probability Empirical Rule, Evaluating Normality	Sampling Central Limit Theorem Chebyshev theorem for non-normal distributions	Case Study and Practical Case studies End of Semester Assessment and Results
Excel				
Python				


Year IV | 3 Sem / 4 months: 2.5 hrs/week class + 3 hrs/week self-study

Sem I	Week 1-3	Week 4-6	Week 7-9	Week 10-12
Theory	Revision : Probability ; Bayes theorem and conditional probability ; Decision Tree; Normal Distribution and Sampling	Intro to Confidence Intervals Uses of Confidence Intervals	Fundamentals of Hypothesis testing Critical Values Level of significance Z tests Critical Values approach P Values approach	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem II	Hypothesis testing & Differences Stats			
Theory	Relationship of Confidence Interval and Hypothesis testing Parametric data Assumptions of Parametric Hypothesis testing	Parametric data Multiple sample and Variables testing - ANOVA (Analysis of Variance)	Non Parametric Data - Chi Square test Assumptions of Chi square test	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem III	Hypothesis testing & Differences Stats			
Theory	Design of experiments (DOE) Comparison : AB testing	Test Sample vs Control Sample Placebo vs Real Drug Sample	Cohort Study - time , characteristics, segment	Case Study and Practical Case studies End of Semester Assessment and Results
Excel				
Python				

Scrapy  **NumPy**
 **pandas** 
 **Keras** **Python Libraries**
 **PyTorch** **matplotlib**

 **CONDA**
 = conda
 + Python.exe
 + base modules

 **MINICONDA**
 = miniconda
 + 150 modules
 + user interface

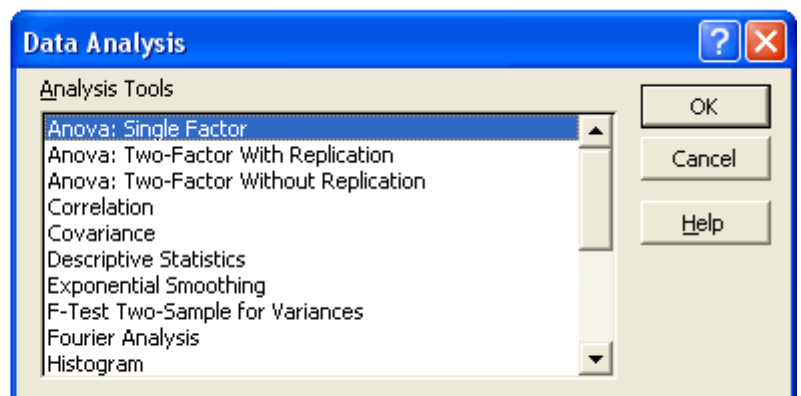
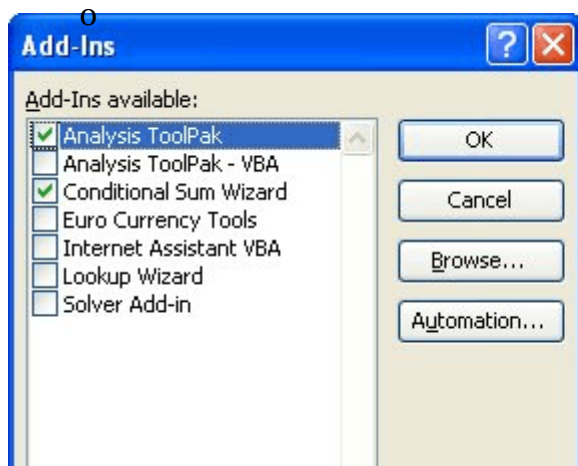
 **ANACONDA**

Year V | 3 Sem / 4 months: 3 hrs/week class + 4 hrs/week self-study

Sem I	Week 1-3	Week 4-6	Week 7-9	Week 10-12
Theory	Revision: Parametric Tests ; Non Parametric Tests	Intro to Linear Associations in Data Correlation ; Multi collinearity visualisation of Association	Identifying the Drivers of the Business Problem Understanding acceptable values to identify top Drivers	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem II	Associative Stats & Basic Predictive Analytics			
Theory	Use of correlation to manage large data sets : 1. Identify variables to keep in project DataMart 2. Identify variables for visualisations	Understanding Linear Regressions (2 variables; Multiple Variables) Errors, R square, Adjusted R square	Assumptions of Linear Regression Iterations and Multiple model creation and selection	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem III	Associative Stats & Basic Predictive Analytics			
Theory	Introduction to Non linear Associations : Clustering , Segmentations Hierarchical vs Partitional	Measure of Distances Clustering methods: K-Means Clustering Density-Based Spatial Clustering of Applications with Noise (DBSCAN)	Clustering methods: Expectation–Maximization (EM) Clustering Agglomerative Hierarchical Clustering	Case Study and Practical Case studies End of Semester Assessment and Results
Excel				
Python				

Year VI | 3 Sem / 4 months: 3 hrs/week class + 4 hrs/week self-study

Sem I	Week 1-3	Week 4-6	Week 7-9	Week 10-12
Theory	Revision: Correlation Linear Regression Clustering	Intro to Time series and Forecasting Data Management for Forecasting	Autoregression (AR) Moving Average (MA) Autoregressive Moving Average (ARMA) Autoregressive Integrated Moving Average (ARIMA)	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem II	Advanced Predictive Analytics			
Theory	Seasonal Autoregressive Integrated Moving-Average (SARIMA) Simple Exponential Smoothing (SES) Holt Winter’s Exponential Smoothing (HWES)	Introduction to Logistic Regression Logistic function, odds, odds ratio, and logit Assumptions of Data and Logistic Regression	Model fitting Creating multiple models and choosing the best model	Case Study and Practical Case studies Mid of Semester Assessment and Results
Excel				
Python				
Sem III	Advanced Predictive Analytics			
Theory	Interpreting and creating recommendation for Linear Regression Model	Interpreting and creating recommendation for Clustering Model	Interpreting and creating recommendation for Logistic Regression Model	Case Study and Practical Case studies End of Semester Assessment and Results
Excel				
Python				



Pexitics Pedagogy | Our approach

- The process of DCOVA & I framework for solving analytical problems
- Every topic to be explained at three levels: maths/statistical concepts, excel (SaaS) and Python coding
- Case-study based approach for alignment to business and real-world problem solving capabilities
- Alignment of curriculum with school/certification board mathematics syllabus
- Alignment of program for ease of admission into top Data Science courses (IITs and IIMs)
- Max 10 students per batch to ensure individual attention and peer group interactions
- Analysis of relevant cognitive & behavioral traits based on customized scale at the end of final year free!



The fact that data can make both processes and people transparent is key to effect productivity efficiency at the workplace and for organisational aspirations post COVID.

The fact that data lies at the core of our expense and worries about privacy, the basis for expansion or diversification of business, the juncture which determines factors best suited to

launch a satellite or shift to green fuels is testimony to why children need to be adept with analytics for future job roles, irrespective of domain and industry.

Based on years of training and delivering analytics projects for both large organisations and startups alike, intends to fix the learning gap in our children with care and a long-term vision. **That's our promise.**

Reach us | score@pexitics.com +91 7349 6623 20/21/22