



# DIGITAL & STEM LITERACY

Informational Brochure



## Our Partners





# About

Throughout the 2020s, more than 1,000,000 STEM jobs will have been added, representing nearly 11% growth compared to less than 8% for all other industries. (the U.S. Bureau of Labor Statistics).

tGELF/JA India aims to invoke interest and imbue skills required in the 21st-century industrial world. These STEM-focused workshop sessions will encourage students to pursue a career in Science, Technology, Engineering and Mathematics through interactive, hands-on application of core concepts and skills. Sessions will focus on enhancing the understanding of students about creating solutions to the problems around us using technology.

## Focus Areas



Engineering-Design Skills



Critical Thinking Skills



Math-Science Skills



Inquiry-Creativity Skills



Hybrid Delivery  
Model



Technology Based  
Learning



Industry and  
Sector Experts



Interactive  
Sessions



Middle School Students

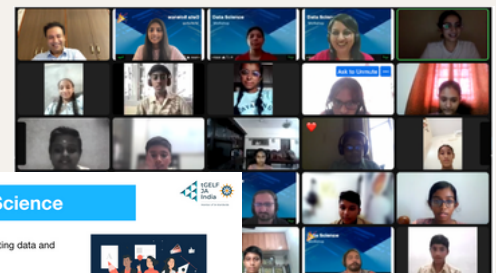
## Workshop on Fun with STEM


This workshop helps raise aspirations for science as a career among students. The students engage in an interesting activity in assembling the Scribble bot. We believe that STEM education is of significant importance. The goal of our STEM workshop is to engage students with early opportunities to acquire STEM knowledge and skills and develop work-related competencies. As a result, the students now know that a STEM career is a possibility.

Middle School Students

High School Students

## Workshop on Learning Data Science






### Data Science

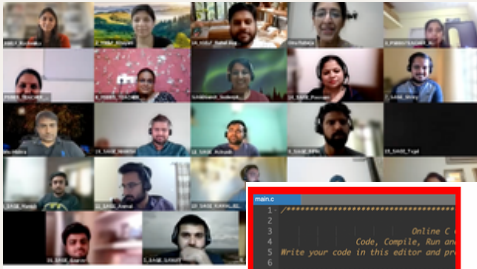
Data Science is a study that focuses on collecting data and drawing meaningful insights out of it.

#### Who is a Data Scientist ?



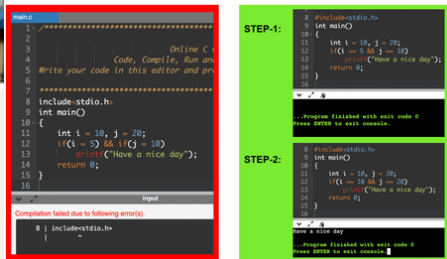
A **data scientist** is one who includes researching large amounts of data to develop hypotheses, make inferences, and analyze customer and market trends. Basic responsibilities include gathering and analyzing data, using various types of analytics and reporting tools to detect patterns, trends and relationships in data sets.

This workshop provides a unique opportunity for the students to learn about the fundamentals of data science and gain knowledge about its real-life applications. The students learn the methods of collecting data, finding patterns in the data, analysing and interpreting the patterns and finally visualising the same through pie charts or bar graphs using Excel. In addition, the students also get a chance to explore other Excel functions.



Middle School Students

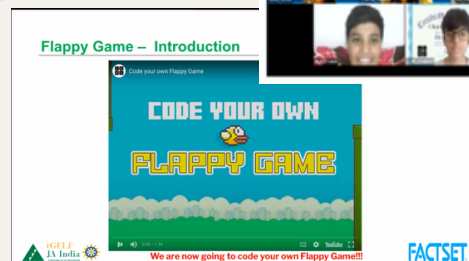
## Workshop on Bugs & Bug Fixing using C



This workshop provides a unique opportunity for students with a computer science background to learn about the real-life applications of coding. Students learn how to identify a bug/error in a code segment and use a logical analytical process to fix it by rewriting the code. These workshops help students improve their confidence in the mother programming languages, provide them with problem-solving skills and spark interest in debugging.

Middle School Students

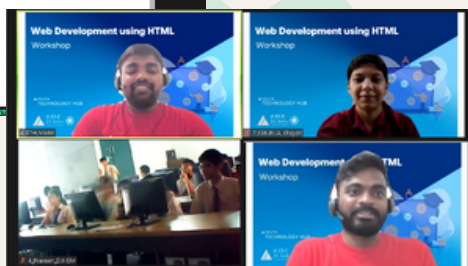
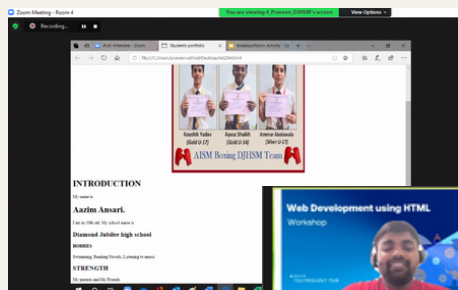
## Workshop on Fun with Coding



This workshop encourages the students to try out their hands at coding through an interactive and fun learning process. Here, the students design a game through simple steps that also allow customisation. This helps students improve their knowledge of coding and gain confidence at a young age. Once the game is developed, every student receives a certificate to boost their confidence.



# Coding



High School Students

## Workshop on Web Development using HTML

This workshop provides an introduction to the basics of web development, the elements and characteristics of HTML and the steps to create an HTML webpage. The purpose of this workshop is to teach students how to develop their own portfolio or website using HTML, as well as to raise their interest and aspirations in web development.

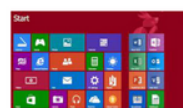
High School Students

## Workshop on Python

### Uses of Python



System programming



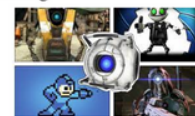
Graphic user interface  
programming



Internet scripting



Database programming



Gaming, images, robotics



This workshop teaches students the fundamentals of the Python programming language. Students write code for a quiz game to learn how to use variables and functions in coding. Learning Python, the fastest-growing programming language boosts students' confidence and opens up new coding opportunities.





— GET CONNECTED —



[www.tgelf.org](http://www.tgelf.org)  
[draheja@tgelf.org](mailto:draheja@tgelf.org)

