

# PRODUCING TECH LEADERS FOR FUTURE





# VISION

# MISSION & VALUES

## Our Vision

To establish a state of the art global online coding school for School kids to catch up with the tech industry quickly



## Our Mission

To excel the coding, mathematical and problem solving skills in school kids to explore their hidden talent through advanced programming technologies

## Our Values

We believe to inculcate the following core values in our future tech leaders

01

### SELF EFFICACY

We generate self-belief in the kids to dig out their hidden abilities to perform any task with confidence to achieve their goals.

02

### SEEKING FOR LEARNING

We value inquisitiveness and growth of kids with different learning needs. We encourage them to become creative, logical thinkers and problem solvers for themselves and the society.

03

### LEADERSHIP

Our teeny coders are the leader of the digital future. We enlighten them with individual and teamwork abilities, coupled with moral and ethical values, to serve the community.

04

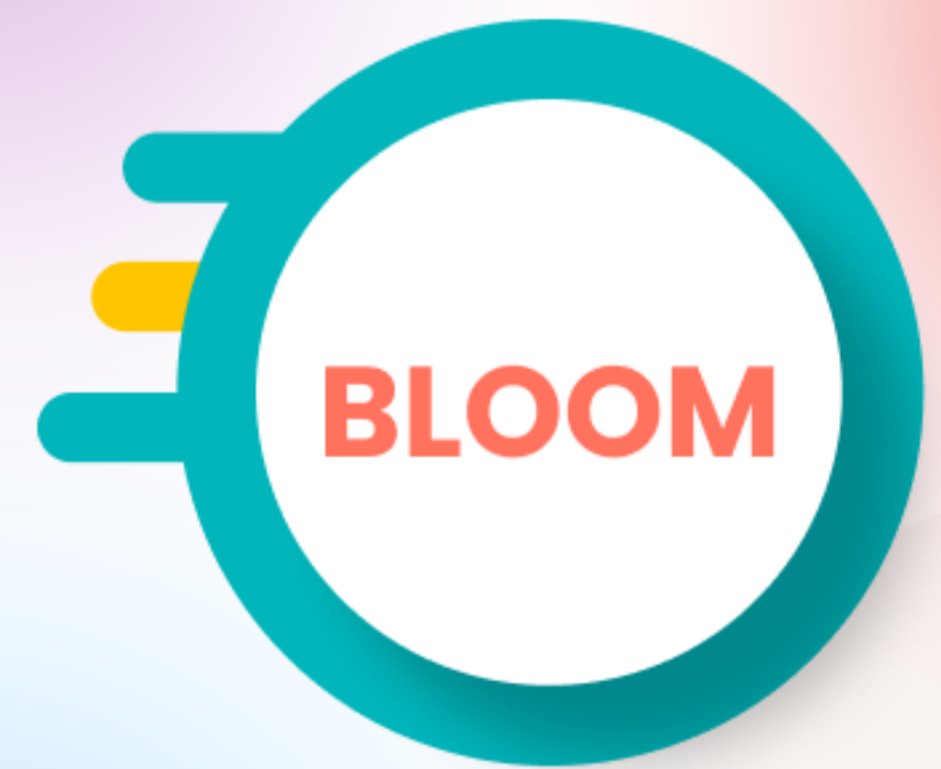
### INCULCATION OF SKILLS

Every day, we are moving towards digitalization. We believe in inculcating coding, mathematical and problem solving skills in kids through our quality curriculum to meet the needs of the digital future.

# WHY TEENY CODERS?

## BLOOM'S TAXONOMY

We believe that every Teeny Coder is the leader of digital future. Our quality curriculum is designed based on these six levels (Create, Evaluate, Analyse, Apply, Understand and Remember) for effective learning. Teeny Coders have 0% compromise policy towards quality education, and adopt the standard guidelines.



## FACE MODEL

Each teeny coder's learning matters. Therefore, we have developed our own **FACE FUN-TO-LEARN, ADVANCED, CREATIVE AND EVOLVING** model to verify that our curriculum is nourishing every teeny coder.



### QUALITY CURRICULUM

Our Quality Curriculum is one of our main products. Our Fun-to-Learn, Advanced, Creative, and Evolving Curriculum is based on Bloom's Taxonomy Standards, which makes sure that every Teeny Coder is obtaining the best coding, problem solving, and cognitive skills.



### COMPETENT FACULTY

We have selected the best faculty for our Teeny Coders, who are graduates from renowned universities with great teaching experience at academia and industry levels. Our faculty is energetic, efficient, and passionate to teach our digital future leaders.



### VARIETY OF COURSES

We, at TEENY CODERS, offer a variety of flavours (courses) which are specifically designed for grade 1 to grade 12 kids. Every course comprises of three difficulty levels (Beginner, Intermediate and Expert). We make sure that every TEENY CODER enjoys their code learning journey with solid concepts.



### STEERING LEADERSHIP

Teeny Coders leadership has combined experience of more than 25 years in academia and industry. Therefore, every teeny coder's future is bright and safe because our leadership knows what is best for your kids.

# MACHINE LEARNING CURRICULUM



# EXPERT LEVEL



## Course Contents



28 Lectures • 32 Activities • Duration: 4-5 Months

LECTURE NO.	TOPICS : ACTIVITIES
Lecture 1	What is image and video dataset : Collecting different images and audios for dataset creation, how to label them.
Lecture 2	Feature Extraction: Pre-processing : Removing noise, normalizing the image or video, and resizing it to a specific resolution using python
Lecture 3	Color space conversion : Converting the image or video to a different color space such as RGB, HSV, or YUV.
Lecture 4	Feature detection : Detecting and extracting features such as edges, corners, or key points using techniques such as SIFT, SURF, or ORB.
Lecture 5	Feature descriptor : Assigning a unique descriptor to each feature, such as a histogram or a set of gradient orientations.
Lecture 6	Scale-invariant feature transform (SIFT) or Speeded Up Robust Feature (SURF) : Implementation via python
Lecture 7	Object Detection : Identifying and locating objects within the image or video using techniques such as R-CNN, YOLO, or Faster R-CNN
Lecture 8	Motion Analysis : Extracting motion information from the video using techniques such as optical flow or motion history images.
Lecture 9	Statistical analysis : Calculating features such as mean, standard deviation, and skewness of the signal.
Lecture 10	Transformation : Applying dimensionality reduction techniques such as PCA or LDA to the extracted features.
Lecture 11	Selection and extraction of relevant features : Selecting the most informative features for the task at hand and extracting them for use in the model.
Lecture 12	Advanced supervised learning techniques : Implementation of XGBoost along with other two techniques via python
Lecture 13	Advanced unsupervised learning techniques : Implementation of K-means, DBSCAN and PCA via python
Lecture 14	Ensemble methods and boosting : Comparing both to analyses which is best in what situation by implementing them.
Lecture 15	Semi-supervised and multi-task learning : Comparing both to analyses which is best in what situation by implementing them.
Lecture 16	Advanced evaluation techniques : Implementation of advanced evaluation techniques.
Lecture 17	i) Time series analysis and forecasting ii) Natural Language Processing (NLP) : Basic into on what are these three and how to deal
Lecture 18	Advanced deep learning techniques : Implementation of advanced DL techniques in python
Lecture 19	Advanced deep learning techniques : Implementation of advanced DL techniques.
Lecture 20	Advanced reinforcement learning : Implementation of advanced reinforcement learning algos
Lecture 21	Advanced reinforcement learning : Implementation of advanced reinforcement learning algos
Lecture 22	Advanced NLP : Implementing advanced NLP
Lecture 23	Generative models : Implementation of generative models using python
Lecture 24	Advanced clustering : Doing clustering via python on an image dataset.
Lecture 25	Advanced optimization : Optimization via python
Lecture 26	Advanced Bayesian methods : Bayesian methods programming via python
Lecture 27	Advanced Time Series Analysis : Dealing with time series analysis via python
Lecture 28	Advanced Recommender Systems : Creation of advanced recommender system