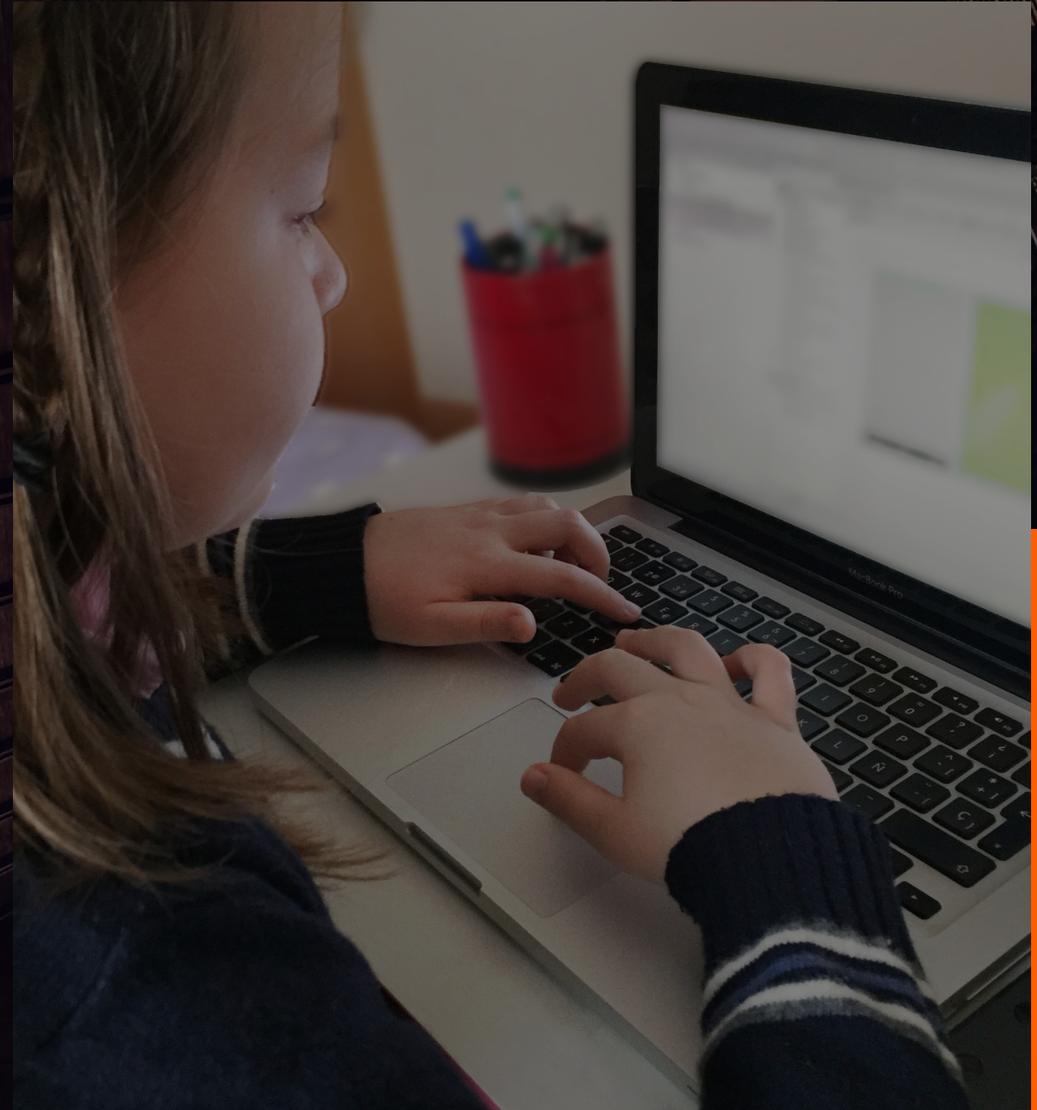




A | Club

Your Artificial Intelligence and
Programming Journey starts today!





Welcome to AI Club!

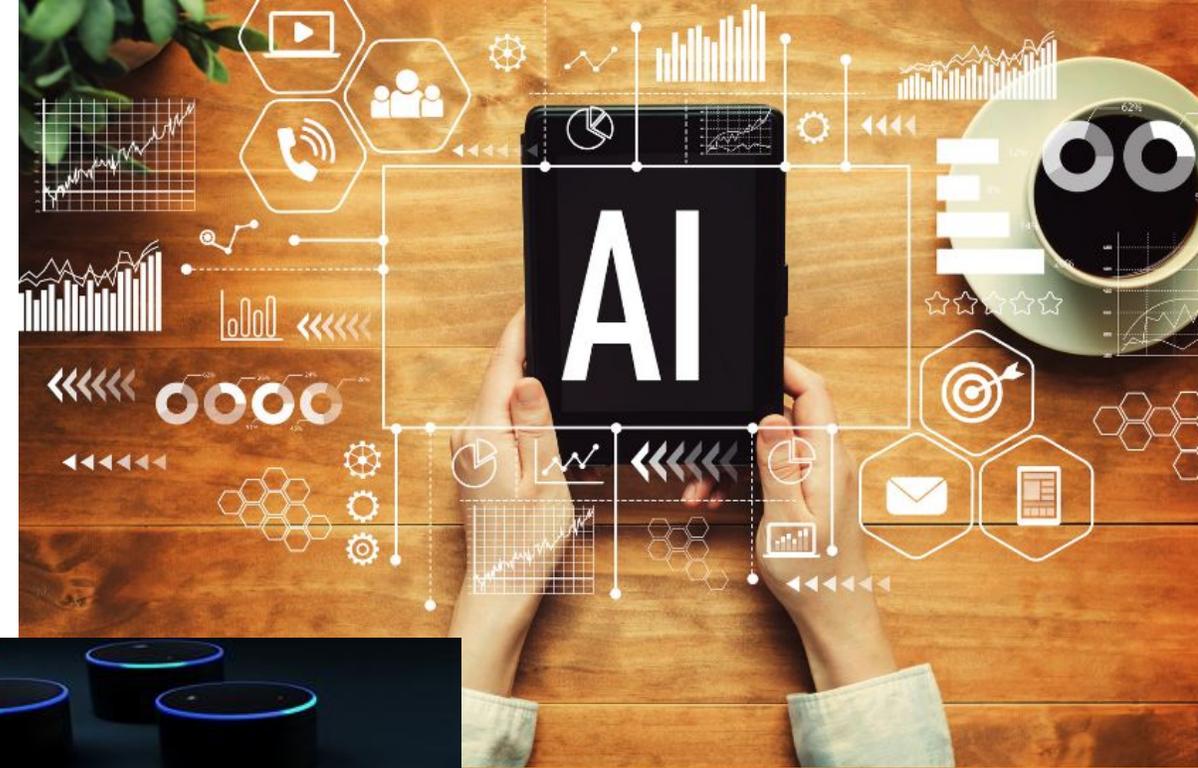
We are so glad to have you onboard!. The AI Club team is excited to take you through everything we have to offer to get you started on your AI and Programming journey!

Our mission is to empower Students, Developers and Business Professionals worldwide to become AI Literate. We provide a pathway for each individual to learn, practice and apply AI as needed for their background, experience level, and goals.

WHY IS AI IMPORTANT?

Artificial Intelligence is a powerful technology that is changing every aspect of our lives. But it goes far beyond fun gadgetry. AI is changing the way companies use information about their customers, how privacy is managed, and how decisions that affect your life - from medical treatments to loan interest rates - are made.

For our future well being, it is imperative that this generation, and every one after it, becomes “**AI-Literate**”. This includes not just understanding how the technology works and how to apply it, but also appreciating its strengths and weaknesses, and as a human, forming opinions on how it should influence and integrate with our lives, our laws and our societies.



\$190 Billion

Is how big the AI market will grow
by 2025

Source



WHAT MAKES AICLUB SPECIAL?

Expert PhD Instructors: All our programs are designed by industry experts with PhDs in Computer Science and Artificial Intelligence

Proven results: Our students have built hundreds of AIs to solve problems in STEM, Medicine, Games, Social Good, Recommendations, Chatbots and more. Our students have won US National and International Competitions in AI, Science and Programming by using their AI Club Learnings

Comprehensive Curriculums: We have curriculums for Grades 4-12, Developers, and Business Professionals. Students can start with no knowledge of AI or programming, and proceed to Expert/Ninja levels.

WHAT WE HAVE TO OFFER



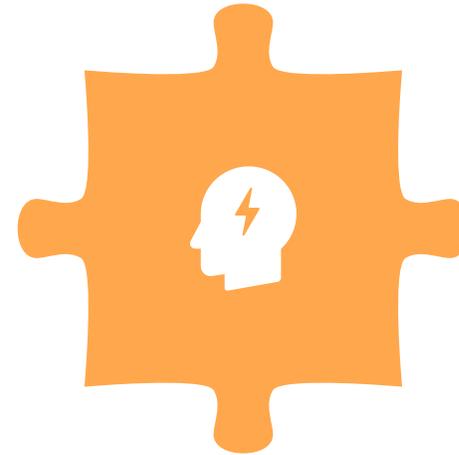
Easy Access

Learn from the comforts of your own home. Online Live Classes, Online Self Paced Classes and Resources



Many Courses

With over 30 courses, AI Club covers all age groups from 10 Year olds to Developers!



Critical Future Skills

Learn AI, Programming, Apps and IoT - core skills for the future



Industry Experts

Course curriculum is designed and taught by Computer Science and AI PhDs from UC Berkeley, Wisconsin and Northeastern.



Dr. Nisha Talagala

Our Founder's Story

Dr. Nisha Talagala is the founder of AI Club. She received her PhD in Computer Science from UC Berkeley. Nisha is a world-renowned computer scientist and an expert in Artificial Intelligence and Machine Learning. Prior to AI Club, she founded an AI startup that helped banks and other large corporations build AIs, which was successfully acquired. She is also a leader in academia organizing top research conferences in AI and write about AI in Forbes and other publications. She has an 11 year old daughter. AI Club started with her efforts to share this technology with her daughter.

She found that no other programs are able to make it easy and fun for kids to learn and practice real AI, so, with colleagues, AI Club was born to make AI accessible to kids and individuals worldwide. All AI Club partners, Sindhu Ghanta and Swami Sundararaman, have PhDs in Computer Science, and together we have built a program where hundreds of students from K-12 have learned AI, built and continue to build AI projects, learn how to understand the AIs all around them, and are empowered to apply AI to their passions in life. We also provide AI education to Developers and Business Professionals looking to upskill in AI.

WE HAVE A PROGRESSIVE CURRICULUM THAT BEGINS FROM ELEMENTARY SCHOOL

ELEMENTARY

E1 AI INTRO

AI CUSTOM 1:1 TUTORING

[VIEW COURSES](#)

MIDDLE SCHOOL

M1 AI BASICS

M2 AI ADVANCED

M3 DEEP LEARNING AND
IMAGE CLASSIFICATION

M4 AI ADVANCED 2

M5 DEEP LEARNING AND
IMAGE CLASSIFICATION 2

PA1 PYTHON WITH AI

PA2 PYTHON WITH AI 2

PA3 PYTHON WITH AI 3

IOS1 IPHONE APPS WITH AI

AI CUSTOM 1:1 TUTORING

[VIEW COURSES](#)

HIGH SCHOOL

H1 AI ALGORITHMS

H2 DEEP LEARNING AND
IMAGE CLASSIFICATION

H3 AI ADVANCED 2

H4 PYTHON WITH AI 3

H5 FULL STACK MACHINE
LEARNING IN AWS

H6 FULL STACK DEEP
LEARNING IN AWS

IOS1 IPHONE APPS WITH AI

AI CUSTOM 1:1 TUTORING

[VIEW COURSES](#)



- + We have immersive and progressive curriculums your child will love!
- + AIClub offers resources tailored for parents
- + We also offer custom recommendations for your child's learning



PARENTS: IT IS TIME TO INVEST IN YOUR CHILD'S FUTURE!

AI is shaping up to be one of the most transformative technologies of our generation! Equip your child with the knowledge necessary to excel in the future that is being built today. At AIClub we use a practical approach to teaching children programming and AI. With our teaching, students without any prior programming or math background learn AI fundamentals and then apply this knowledge to solve problems in their lives and communities

KIDS: GET READY TO BUILD CHATBOTS AND APPS IN AN EASY AND PRACTICAL WAY!

- + Learn AI in Easy and Fun Ways!
- + Build and showcase your own AI projects!
- + Compete and win in competitions or hackathons!

The only program designed by AI and CS experts with PhDs that offers AI at this scale for students! Join the AIClub community and follow our progressive curriculum from highschool and beyond. Over 200 datasets available online to help you build AI apps and over 100 videos of fellow students projects to get you inspired!



AICLUB STUDENTS WIN COMPETITIONS

Sandpiper Middle School, 1st Place STEM Competition

An online AI service to detect cancerous and benign cases of Invasive Ductal Carcinoma from histopathology images of breast cancer. The deep neural network was trained on publicly available images.

Technovation AI Challenge, Winner - North America Senior

The Smart Waste Sorter is a device that attaches to waste bins to help identify if the trash being disposed of is entering the proper bin. It educates the public and aids recycling centers that face large amounts of improperly disposed of materials.

Broadcom MASTERS 2020 National Competition - Finalist

Congratulations to AIClub student Anika Pallapothu for becoming a Finalist at the nation's premier science competition. Anika built an AI program to spot Diabetic Retinopathy by looking at a digital image of an eye, helping address a leading cause of blindness and help doctors all around the world.
[Read all about it here](#)

Technovation AI Challenge, Winner - North America Junior Division

Calmzilla is designed to help students alleviate their stress. Based on user input, the app suggests a number of stress relieving games based on predicted stress level and informs guardians of the student's stress level.

Winners at Girls Programming League Challenge 2020

Team MD5 - with all three members from AIClub - won 7th place at the Girls Programming League Challenge 2020. They solved a series of programming challenges to make the Top 10% of their peer group

A FEW AICLUB STUDENT PROJECTS

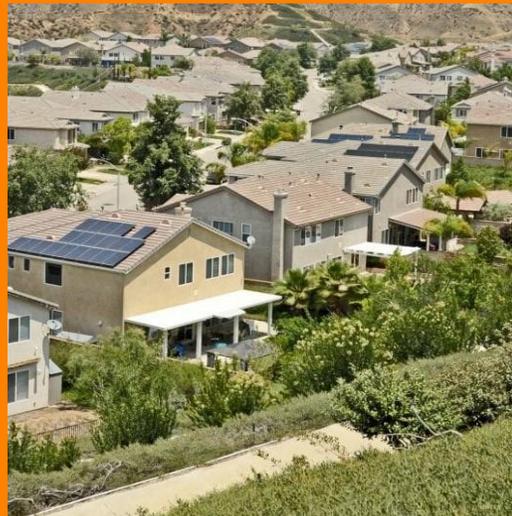
M1



WIND INSTRUMENT IDENTIFIER

Corlan's AI can identify images and state which kind of wind instrument it is!

M2



LA COUNTY HOUSE PRICE PREDICTOR

Aahan's house price predictor determines the price of a house based on attributes of the house!

M3



PLANT DISEASE IDENTIFIER

Mihit's plant disease identifier can look at an image and tell if a crop is infected or not!

PA1



STOCK PRICE PREDICTOR

Anay's stock price predictor can predict the closing price of a stock based on a few inputs!

**Click on the images to view the project video!*



PROGRESSIVE CURRICULUM

Each course is designed and conducted by Experts/PhDs who have built real world AI systems.

These courses are structured to make sure all the fundamentals of programming and AI are covered in a way that students can easily grasp.

The courses allows students to choose their final project which allows them to use their new AI knowledge to build an AI that is in par to their interests.

AIClub equips the future generation of leaders with the skills necessary to harness this powerful technology.

	ELEMENTARY	MIDDLE SCHOOL	HIGH SCHOOL
AI INTRO	E1		
AI BASICS		M1	
AI ADVANCED		M2	H1
DEEP LEARNING AND IMAGE CLASSIFICATION		M3	H2
AI ADVANCED 2		M4	H3
DEEP LEARNING AND IMAGE CLASSIFICATION 2		M5	H4
PYTHON WITH AI		PA1	PA1
PYTHON WITH AI 2		PA2	PA2
PYTHON WITH AI 3		PA3	PA3
IPHONE APPS WITH AI		IOS1	IOS1
FULL STACK MACHINE LEARNING IN AWS			H5
FULL STACK DEEP LEARNING IN AWS			H6
CUSTOM 1:1 TUTORING	YES	YES	YES



Get Inspired with AI!

AI is all around us! From self driving cars, to movie recommendations on Netflix, to Alexa, Siri or Google homes, we interact with AIs every day. Learn how they work, how they “think” and how you can build one of your own!



- + **What is AI, different types of AI, and how AI is built and used**
- + **Build AI to learn from words and patterns. Build different types of AIs to predict Numbers and Categories**
- + **Learn how to improve an AI with better data. Play with Real Life AIs!**
- + **Teach an AI to compete and win in a game**



AI Basics Made Fun and Easy

Learn Artificial Intelligence (AI) and Machine Learning (ML) by training ML algorithms, building ML models, building AI applications using these models, and interacting with these applications in a code lab.

- + **Build AI and ML models for different types of data**
- + **Build different types of predictive models (Regression and Classification)**
- + **Learn the basic parameters that impact AI model performance**
- + **Bring in your own data to build a custom AI that can predict what you choose**
- + **Code lab where you connect your custom AI to build an intelligent application (like a chatbot) in Scratch, Python or Java.**
- + **Use the same industry cloud tools that businesses and experts do, we show you how to use them easily. You can use the same tools as you do more advanced classes.**

AI Advanced - For Middle School and High School

In this class, students learn how AI works internally, how to tune AI and improve its performance, how to select the right AI for different problems, and how to apply AI to games and competitions. This course complements and builds on what students have learnt in AI Basics!

- + **Learn the details of ML algorithms, specifically KNN, Decision Tree, Linear Regression, Neural Networks**
- + **Build and tune the hyper-parameters of these ML algorithms to build end-to-end working systems. Learn what hyper-parameters are, how they control the behavior of these algorithms, and how to modify them. Learn core concepts of regularization and feature engineering.**
- + **Learn to understand the type of problem and suitable algorithm in publicly available datasets such as Kaggle.**
- + **Bring your own data and build a custom AI driven application in a code lab. You can program in any language you like. We will provide examples in Python, Scratch, Java and Javascript.**





Deep Learning and Image Classification

Students learn to create sophisticated images based projects leveraging advances in Artificial Intelligence (AI) and Deep Learning/Neural Networks. Students will learn different types of Neural Networks from basic Multi-Layer Perceptrons to advanced Convolutional Neural Networks and Residual Neural Networks. Each student will build a custom image classification project using cloud based AI tools.

- + **Learn the basics of Deep Learning and Neural Networks**
- + **Learn different types of Neural Networks from Multi-Layer Perceptrons to advanced Convolutional Networks.**
- + **Learn how Neural Networks work internally, and how to select, tune and optimize different networks for different problems.**
- + **Build a custom project from scratch with an end to end working Deep Neural Network AI. We will provide project ideas using Natural Images, Scientific applications using medical images, Game applications using synthetic Images, etc.**
- + **Use the same industry cloud tools that businesses and experts do. Learn how to use them easily. Leverage this learning for more advanced classes and real world projects.**

AI Advanced 2

This course is for anyone who has either taken AI basics (M1) or is in 8th grade or higher. AI Basics shows students what AI is and how to use it. In this class, students learn the internals of powerful AI algorithms in Decision Trees and Natural Language Processing (NLP). They learn how to tune these algorithms and advanced concepts such as Overfitting and Explainability.

- + **Learn about the Random Forest algorithm (Decision trees and expertise on tuning the parameters that are used to deploy random forest models)**
- + **Learn more about Text Classification, a subset of Natural Language Processing**
- + **Apply learnings to train an AI to learn and compete in a target shooting game!**
- + **Discover what algorithmic fairness and trust mean..**
- + **Understand the types of bias that can result when automated decision making is applied to real world data. (Automation bias, sample bias, implicit bias etc)**
- + **As a culminating project + presentation, the students will build a custom project of their choice with their deeper level of understanding on algorithms!**



MIDDLE
SCHOOL

HIGH
SCHOOL

Deep Learning and Image Classification 2

This course enables students to create sophisticated projects using images by leveraging the advances in Artificial Intelligence (AI) and Deep Learning/Neural Networks. This course is ideal for high school students who want to use AI on images for innovative science projects, for those who want to build systems using computer vision and cameras, or anyone who wants to learn image classification using deep neural networks.

- + **Optimize special types of Neural Networks, particularly Convolutional Neural Networks (CNN) and Residual Neural Networks (ResNet)**
- + **Learn Neural Architecture Search and how to optimize a network design**
- + **Each student builds a custom project of their choice (note - students interested in competitions are welcome to work on their submission candidate).**
- + **Use the same industry cloud tools that businesses and experts do (we heavily use Amazon Web Services AI tools), we show you how to use them easily. You can use the same tools as you do more classes.**



Python with AI: Build a Smart App!

This is the first of a three part course series that teaches students Python and creation of AI applications.

In this course, students learn how to program in Python and how to connect a Python program to an AI. In their custom project, they will build an application in Python that uses AI and showcase their project in AI Club and Github.

- + **How to build an application from scratch in Python that uses input, generates output and is able to call application programming interfaces (APIs).**
- + **To use an IDE (Development Environment) to create, run and debug Python applications.**
- + **How to create a github repository and put their work there (this will be the start of an important programming skill of how to version their code).**
- + **How to connect AIs to application code to build intelligent applications.**
- + **How to build applications that use two or more AIs at once.**

The students will build a custom project in Python and learn how to debug, test and present their final application in a demonstration.



Python with AI 2 - Data Science

This is the second of a three part course series that teaches students Python and complements the AI course series. Students can use what they learned in the AI series to build smart applications in Python, and use the Python learnings to both build applications and to study and understand data better.

- + **How data structures work and powerful Python libraries that can be used to process data.**
- + **Basics of statistics and how to analyze and understand datasets using Python.**
- + **How to use Python to experiment with datasets. How to generate data using Python and different programming constructs that are available in Python to manipulate data (arrays, dictionaries, dataframes etc.)**
- + **How to process numerical, image, categorical and text data in Python**

The students will build a custom project in Python and learn how to debug, test and present their final application in a demonstration.



Python with AI 3- Build Your Own Algorithms!

This is the third of a three part course series that teaches students Python and complements the AI course series. Students can use what they learned in the AI series to build smart applications in Python, and use the Python learnings to build AI algorithms.

- + **How scikit-learn can be used to train ML algorithms.**
- + **Build AI algorithms from scratch.**
- + **How to modify data and tune the algorithm to improve training and prediction performance.**

The students will build a custom project in Python and learn how to debug, test and present their final application in a demonstration. With the knowledge gained in this class, students can access public datasets like Kaggle, process the data in python, and do their own programming to continuously retrain the algorithms with new data.



iPhone Apps with AI

This course teaches students how to build iPhone Apps and complements the AI course series. Students can use what they learned in the AI series to build smart applications in Swift - the iPhone programming language, and use these learnings to build applications and to better understand data.

- + **Learn the basics of the Swift programming language, including data types, collections, and flow control.**
- + **How to build an iPhone application from scratch which interacts with the user and is able to call application programming interfaces (APIs).**
- + **How to connect AIs to application code to build intelligent applications.**



Full Stack Machine Learning in AWS

Learn Artificial Intelligence (AI) and Machine Learning (ML) through hands-on exercises using native cloud tools in AWS. Course is designed by experts in the field with PhDs who have built several real world ML systems. This course is suitable for anyone interested in learning about this emerging field of Machine Learning (ML) using tools used by the industry.



- + Build AI and ML models for different types of data: Numerical, Categorical and Text
- + Build different types of predictive models (Regression and Classification)
- + Learn to process raw data to a form that is acceptable to the DL algorithm and AWS for building a pipeline
- + Learn to use AWS cloud tools such as:
 - S3
 - AWS SageMaker
 - AWS Lambda
 - API Gateway
- + Learn about microservices and REST API
- + Every ML pipeline built by the user is published as a microservice
- + Learn to detect skew and bias in ML pipelines
- + Production best practices
- + Use the same industry cloud tools that businesses and experts do, We show you how to use them easily. You can use the same tools as you do more advanced classes.

Full Stack Deep Learning in AWS

Learn Artificial Intelligence (AI) and Deep Learning (ML) through hands-on exercises using native cloud tools in AWS. Course is designed by experts in the field with PhDs who have built several real world ML systems. This course is suitable for anyone interested in learning about this emerging field of Machine Learning (ML) using tools used by the industry.



- + Build AI and DL models for different types of data: Images and Time-Series Forecasting
- + Build different types of predictive models (Image Classification and Forecasting)
- + Learn to process raw data to a form that is acceptable to the DL algorithm and AWS for building a pipeline
- + Learn to use AWS cloud tools such as:
 - S3
 - AWS SageMaker
 - AWS Lambda
 - API Gateway
- + Learn about microservices and REST API
- + Every DL pipeline built by the user is published as a microservice
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ELEMENTARY

MIDDLE
SCHOOLHIGH
SCHOOL

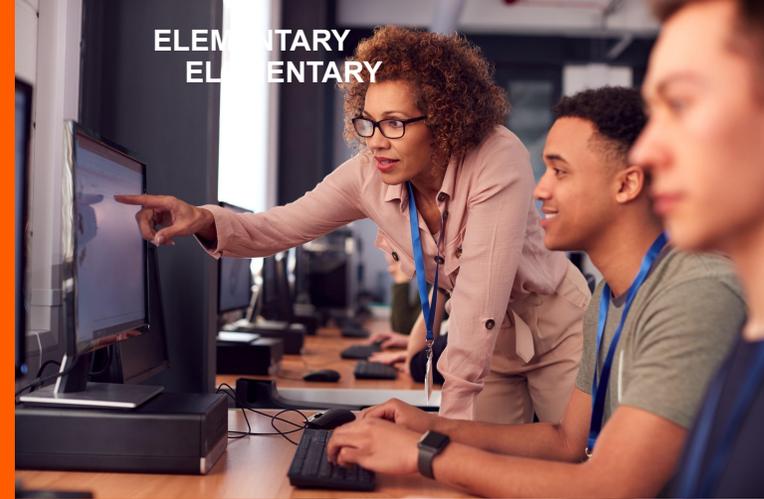
Custom 1:1 Tutoring

Customized training programs for students from Grades 4-12. Covers a combination of Artificial Intelligence, Programming (Python and iOS), and Math (Linear Algebra, Statistics, etc.) as needed for the student to reach their learning goals.

Your lead instructor will individually work with you and your student to design a custom training curriculum for your unique needs

- + **Your lead instructor will be your primary contact throughout your learning journey. They may bring in other AIClub experts as needed.**
- + **All classes recorded and available for students to review. Dedicated slack channel to contact the instructor anytime between classes.**
- + **Custom progress reports sent to parents after every alternate class.**

Interested? Please contact us at one@pyxeda.ai for a free consultation



SOME MORE AICLUB STUDENT PROJECTS

M2



DISEASE PREDICTING AI

Djoni's AI interprets your symptoms and tells you what disease you may be having

M3



RAIN OR SHINE IDENTIFIER

Ananya's AI analyzes images of the sky and predicts the whether it would rain or shine

PA1



MOOD BASED MOVIE/BOOK RECOMMENDER

Aarav created an AI chatbot that book or a movie for you to watch by simply asking you a few questions

PA2



COVID PREDICTOR BASED ON CT SCANS

Sarah's AI can assess if a patient had COVID based on images of their CT scans

**Click on the images to view the project video!*

Why wait? Join AIClub now!



Info@pyxeda.ai



(925) 577-3085



<https://aiclub.world>

**Click the icons below to access all
our courses!**

ELEMENTARY

MIDDLE SCHOOL

HIGH SCHOOL