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# Coding Minds Academy

Code Compete Research Innovate

# Coding Minds Academy

## FROM CODE TO TOP-CLASS UNIVERSITY

Coding Minds was collectively established by a group of American professors, all of whom possess extensive experience with teaching. Classes at Coding Minds place an emphasis on developing practical skills for students to use throughout their educational career, thereby providing them with the coding knowledge that will strengthen their skills and prepare them for a bright, educational future.



## Table of **CONTENTS**

Coding Education in the U.S. 04-05

About Our Academy 06-07

Founding Members 08-09

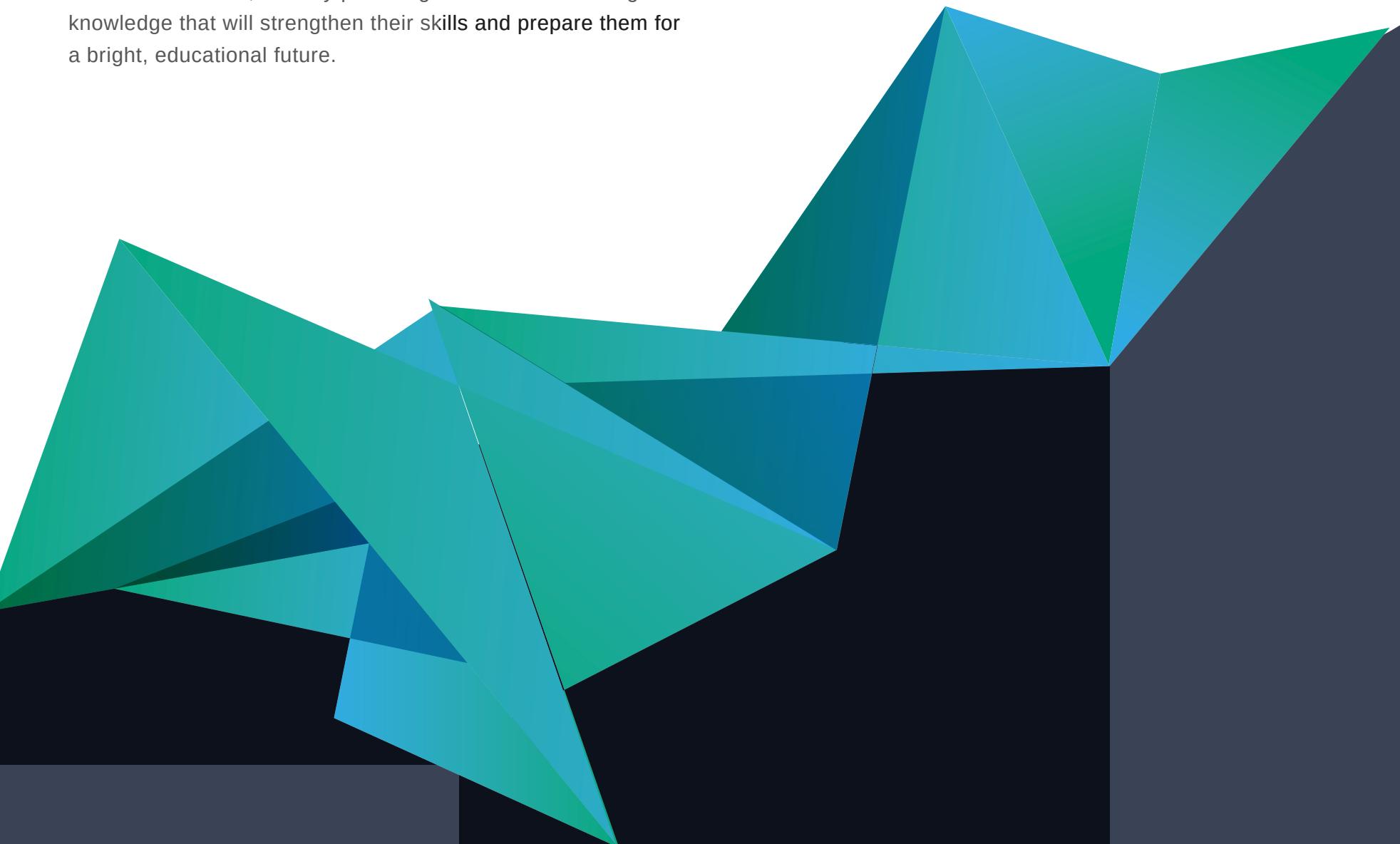
Instructors 10-11

Courses 12-15

Competitions 16-17

Project Showcase 18-21

Partners 22-23



# Computer Science Education in the United States



In 2018, over 20 states passed legislation approving computer science to be integrated in K-12 schools. At this time, another 15 states were in the process of drafting similar legislation.

## Trump Administration

In 2017, the Trump Administration, like the Obama Administration, signed legislation expanding the scope of STEM and computer science education.

## Obama Administration

In 2016, the Obama Administration signed into law "CS for All" which is the first national government legislation to push for K-12 computer science and programming education.



In 2019, the California Department of Education passed K-12 standards for computer science education in addition to beginning to push for actual course development in every school.

# From Code to Top-Class University

The benefits of coding go beyond the programming languages themselves, as it develops skills that allow people to solve practical life problems.



## Project

Project Based Learning is used as a foundation to incorporate students' interests in creating programs, solving problems, and building confidence as well as experience.



## Compete

Competitions not only help students meet short and long-term goals but also provide them the unique experience, growth, and confidence to gain admission into top universities.



## Research

Engaging in research serves as a source of encouragement and stimulation for students to address new questions, experiment new ideas, and publish new findings to the world.



## Innovate

Students can use the programming and technical skills acquired to solve real-world problems and start off as young entrepreneurs from as early as middle school.

Following the rapid rise of computer science, it has played an increasing role in education as well as daily life, and as a result, it has become a distinguished field. Instructors at Coding Minds continuously keep in mind the goal of sparking their interests in coding and paving their way to higher-level institutions.

# About Coding Minds

Established by a group of experienced American professors, Coding Minds emphasizes the importance of developing critical-thinking and problem-solving skills for students, all of which can be applied to different aspects of their younger and adult lives and lead to a brighter future.

Orientated toward K-12 students, the classes at Coding Minds incorporate aspects of programming languages, artificial intelligence, game development, as well as other important fields. Coding Minds, within the past few years, has not only provided invaluable educational and entrepreneurial guidance for students but also has successfully placed them on the path to admission to top universities.



# Founding Members



## Founder

Dr. Yu Sun is currently a tenured professor at the Caltech Department of Computer Science, and he is simultaneously the director of SoftCom Lab as well as one of the co-founders of indoor navigation system Ziiio. He additionally hosted a variety of programs in conjunction with Google for Education, founded and led a series of computer science and educational activities, brought programming and youth computer science competitions to hundreds of public and private schools in California, all while impacting 18,000 elementary and middle school students each year. This is also not to mention his impact on international schools and study-abroad programs in China, as he is also the founder and leader of Coding Minds in the United States.



## Educational Consultant

Dr. Jeff Gray is currently a tenured professor of computer science at the University of Alabama. He is also the forerunner of K-12 computer science and programming education. Not only a member of the educational consulting committee at code.org, Dr. Gray is additionally the chair of Alabama Governor Kay Ivey's committee for computer science consulting. Dr. Gray has additionally held a variety of events for natural sciences in America, all while drafting the newest curriculum for AP Computer Science. Dr. Gray has additionally received support from the Obama Administration's CS For All initiative.



## Educational Consultant

Dr. Jules White is a tenured professor at the computer science department of Vanderbilt University, and she additionally teaches as a distinguished educator at Virginia Tech. Dr. White mainly focuses on research pertaining to big data, AI, data optimization, and information security as well as information systems in fields of medicine, energy, and architecture among many more. Dr. White has additionally commercialized a variety of research projects including Ziiio, Optio Labs, PAR Works, with finances accumulating over ten million USD. In addition, Professor White has provided a variety of computer science courses on Coursera as well as other popular MOOCs, all of which have surpassed two hundred-thousand students in total.

# Education Committee

## AI & Big Data



Bo Li is currently a professor of computer science at the University of Illinois. A few years ago, she was a core publisher of numerous periodical materials on AI at global conferences, including NIPS, AAI, ICML, CVPR. She mainly works on projects with the American Natural Science Fund, and is well-known for her work in AI within the academic world.

## Startup & Innovation



Edmond Banayan is currently the chairman of the Los Angeles Venture Association as well as Chronaly CEO. He is also the primary consultant for a variety of startup businesses and has also participated in the organization and judging of startup incubator programs, including that of the nonprofit K12 Ventures.

## Web Development



A high-level software engineer at Facebook, Gerry Ferando Patia primarily is responsible for the application of AI to the mobile interface of Facebook. During college, Gerry won multiple Hackathons, including those at Harvard and CalTech.

## Algorithm



Dr. Di Pan is currently a high-level software engineer at Google who mainly is responsible for the design and optimization of safety-related complex algorithms. Specialized in mathematical theories, he previously was working as a team recruiter and trainer for the ACM Information Science Competition during college.

## Game & Animation



Daniel Acevedo is currently a high-level game developer and software engineer at Sony PlayStation. He played a role in releasing a variety of gaming products such as the famous God of War and Bloodborne. In addition, Daniel is also deeply committed to youth education, and has served as a judge in the game development competition GameGala.

## Robotics



Zach Kysar is currently a high-level software engineer at Google and led the development of Android Auto, Google Auto, and the software and hardware of Google driverless cars. Zach was additionally Google's sponsored contributor of IgniteCS while also having led a variety of computer science education initiatives for younger students in Southern California.

# Instructor Training

Our instructors are the soul and spirit of the education industry, as they directly determine the quality of education our students receive. Coding Minds has spent many years putting into practice a unique combination of traditional instructional methods and computer science concepts, in addition to utilizing the most-refined, adapted, and interactive teaching approach. As a result, we have thoroughly worked to resolve the discrepancy of understanding between mathematics and programming within the computer science education industry.

For the most part, our instructors at Coding Minds come from private companies as well as computer science departments from large universities, all of whom have gone through a rigorous recruitment process in order to guarantee quality skills and abilities to be applied within the classroom. Before officially beginning classes, Coding Minds will evaluate and provide comprehensive training for instructors based on their communication abilities, teaching methods, and grasp of course content. During the process of teaching, we will consistently observe and evaluate the status of their classes in order to guarantee the quality of education at our institution.

Besides evaluating the daily progress of our instructors, we at Coding Minds invite professionals to provide training and ensure their attunement to the progression of the computer science industry. The importance of our instructors is self-evident, and we find priority in selecting the best of instructors for our students and the overall initiative of teaching programming.

Meet our teaching staff

## Instructor Team



**Mr. Hasse**

From Louisiana State University  
**Major:** Computer Engineering  
**Specialization:** Algorithm, Game Engine Development, Electronic Circuit Design



**Mr. Gomberg**

From California State Polytechnic  
**Major:** Computer Science  
**Specialization:** AI, Machine Learning, Web Server, Network Security



**Mr. Johnathan**

From UCLA  
**Major:** Computer Science  
**Specialization:** Network Design, Game Development, Software Engineering



**Mr. Jones**

From University of Delaware  
**Major:** Computer Science  
**Specialization:** Web Server, Web Development, Network Security



**Mr. Gunnell**

From California State Polytechnic  
**Major:** Computer Science  
**Specialization:** AI, Machine Learning, Web Server, Network Security



**Mr. Singh**

From UCI  
**Major:** Computer Science  
**Specialization:** Game Design, Game Development, Mobile App Development



**Mr. Diaz**

From UCI  
**Major:** Computer Science  
**Specialization:** Computer Vision, Algorithm, Software Engineering



**Mr. Emmanuel**

From UCI  
**Major:** Computer Science  
**Specialization:** Human Computer Interaction, Data Visualization, Software Engineering



**Mr. Aaron**

From UCI  
**Major:** Computer Science  
**Specialization:** Game Engine Development, Data Analysis



**Mr. Lazar**

From UCI  
**Major:** Computer Science  
**Specialization:** Embedded System, Circuit Design and Development, UI, Mobile Development



**Ms. Whitney**

From UCI  
**Major:** Computer Science  
**Specialization:** Game Design, 3D Modeling, UI, Algorithm

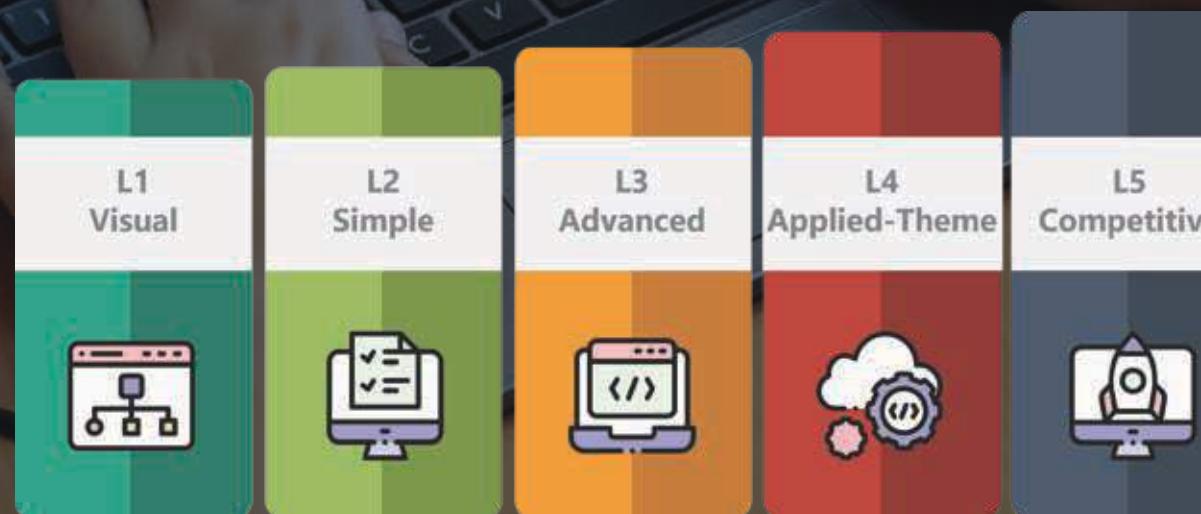


**Ms. Monica**

From California State Polytechnic  
**Major:** Computer Science  
**Specialization:** Bioinformatics, Software Design, Distribution System

# Innovative Class Structure

Following the arrival of the digital age, there has become an increasing trend of learning coding among younger students. With logic and problem-solving serving as the foundations of coding, there is a definite entry level required in order to become successful. Rather than utilizing instructional methods that encourage students to take shortcuts, the curriculum at Coding Minds emphasizes the quick, yet thorough, development of applied knowledge and concrete skills. After all, it is through employing science-based methods of instruction that instructors manage to develop students' interests, encourage progress, and obtain exceptional results.



## Learning through Applying Class Levels 1-3

### L1 Visual Programming

Developed by the MIT Media Lab, visual programming languages are the most suitable platforms for beginning students, as they allow programmers to rapidly develop the fundamental skills and basic concepts for coding.



Minecraft World Building and Instruction Programming



Robotics and Programming with LEGO Mindstorms



Innovative Programming with MIT Scratch



Robotics and Programming with SRPK

### L2 Simple Programming

Text-based programming places particular emphasis on writing lines of codes in languages such as Javascript and Lua, thus providing students with the skills to write actual code and lay the foundations for a career in programming.



Minecraft Programming with Javascript



Javascript Advanced: MicroBit Circuit Programming



Game Development with Roblox Studio



Advanced Roblox Game Development and Lua

### L3 Advanced Programming

Starting off with Python, a high-level programming language, students will gradually learn to utilize computer programs to solve complex problems.



Python Programming with Minecraft



Advanced Python Programming: Introduction to Algorithm



Python Programming: Build Real World Applications



Advanced Lego Robot Coding with Java

The curriculum of Coding Minds was compiled by a team of professors in computer science with the goal of preparing students for successful college admissions and the development of practical skills as well as deep passions for coding, all of which allow students to obtain a solid foundation in the world of coding.

## Learning through Applying

# Class Levels 4-5

## L4 Applied Theme Programming

Students, with a definite ability in programming, will be able to create specialized, thematic programs. As such, students have the opportunity to follow their interests and develop professional programs.



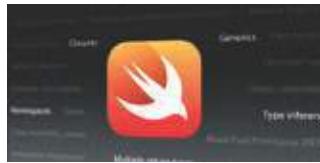
3D Game Programming with Unity3D



Advanced Game Development with Unity3D



Mobile App Programming with MIT App Inventor



iPhone APP Development and Swift programming



Advanced Python Programming: Introduction to AI



Artificial Intelligence and Game Development



Electrical Engineer Growth Path: Arduino Programming



Electrical Engineer Growth Path: Raspberry PI



Game Development with Unreal Game Engine: Create Your Fortnite



Computer Information and Network Security



Advanced Python Programming: Deep Learning



Professional Animator Growth Path: Maya 3D Modeling



College Application Enrichment: Mobile App Development



College Application Enrichment: Unity3D



College Application Enrichment: AI and Machine Learning



Science Fair Enrichment: Coding Project



Algorithm Competition: Computing Olympics 1



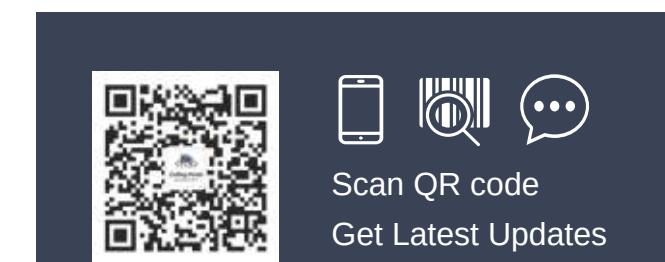
Algorithm Competition: Computing Olympics 2



Algorithm Competition: Computing Olympics 3



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## Class Sampling

We provide free online and in-person sample classes



Sample classes cover visual programming, simple programming, advanced programming, applied theme programming as well as other valuable aspects of programming. With experienced instructors, these sample classes will guarantee that students will experience the wonder of code for themselves and subsequently enter the world of programming and computer science.



Fill in Sample Class Information Form



Schedule a Time for Sample Class



Online & In-person Option



Get Feedback & School Entry Plan

## L5 Competitive Programming

At this stage, students will be guided through competitions in information and general science as well as the AP Computer Science exam, both of which will solidify the students' programming backgrounds and propel them into a career specialized in programming.



College Application Enrichment: Python Basic



College Application Enrichment: Python Advanced



College Application Enrichment: Technovation



AP CS Boot Camp: Intro to Java Programming



Informatics



Science



Project-based



Innovation

## We Provide Project and Competition-Based Courses

### GameGala



First held in 2017, GameGala is a competition that incorporates the theme of game development and is geared toward providing a communication-based platform for K-12 students who compete with their already-developed game/project. The 2018 GameGala was held at the California Science Center, and projects were not only limited to games but were diverse in nature and incorporated a lot of detail.

### The Regeneron Science Talent Search



Having started in 1942, The Regeneron Science Talent Search is the renown science competition among high school students. Numerous previous winners continue to engage in the science industry and experience great accomplishments within the fields, which is also not to mention among them are 13 Nobel Prize Winners as well 11 recipients of the National Medal of Science.

### HSPC



Organized and hosted by Cal Poly Pomona, HSPC is an information science competition geared toward middle school students. Participants compete with other experienced students at the CPP campus where they are required to solve six algorithmic problems within three hours. Participating in such a conference provides students the chance to display their technological and programming skills as well as their abilities in problem-solving.

### IgniteCS Expo



IgniteCS is a programming competition mainly for K-12 students that allows them to create a platform showcasing their creativity and programming skills. Previous competitions involved robot, web, and app development as well as artificial intelligence, network security, as well as other rising fields. Participants with any projects involving computer science can also compete.

### USACO

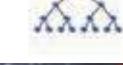


### K12 Ventures



K-12 Ventures is a startup incubator platform that allows student entrepreneurs to gather and showcase their startup projects. Students will not only have the chance to exchange experiences with individuals in the investing and technology worlds, but they will also gain recognition, earn prizes, and acquire investments.

### Technovation



### Coolest Projects



Coolest Projects, initiated by the Raspberry PI Foundation, is a competition held yearly in North America, Europe, and other international locations. This competition incorporates various types of projects including hardware and circuits as well as game and phone development. This competition emphasizes hands-on experimentation and on-site development.

### AMITY



The United States of America Computing Olympiad is a programming competition geared toward American middle school students. The competition is split into 4 competitive groups including bronze, silver, gold, and platinum. Students with excellent performance in each group will be able to advance. The top contestant in the platinum group serves as the representative for the national team in the international competition.

# Partners

Established to fulfill the needs of programming education, many Coding Minds instructors come from high-level institutions as well as leading corporations, which is also not to mention the consistent collaboration of individuals from the academic and industrial sectors to this day. Coding Minds Academy periodically invites academic and industry experts to share and discuss recent developments in the world of computer science and provide up-to-date information and recent developments for our instructors. At the same time, Coding Minds additionally receives feedback and information regarding contemporary instructional methods pertaining to computer science in order to guarantee the cultivation of talent for both the academic and industrial sectors.

## University



## Industry



# Third Party Course Services

Coding Minds serves as the starting point of young students for exploring and deepening their knowledge of the world of coding, especially as a result of us providing a variety of third party services within our classes. Such services include curriculum design, lesson planning, progress management, teacher training, course delivery, and management consultation among many more. Our academy relies on the extensive experience of our instructors to serve the educational needs of numerous families and also establish a platform for learning and teaching programming, all while earning the support and praise of partners from the private sector.



We provide our partner schools the opportunity to have a class taught by our own instructors along with any necessary educational and technological support