



# **INSPIRIT AI in Brains**

In-Person Artificial Intelligence intensive for middle and high school students taught by instructors from Stanford, MIT, and Ivy League universities.





Summer Camp IA Brains



## WHY AISCHOLARS?

We started Inspirit AI to inspire **students of all interests** at an early age to understand and apply Artificial Intelligence to **improve the world**. The potential to use this technology for good is limitless. We hope to bring the most recent developments in AI from courses and labs in Silicon Valley to **empower high school students globally**.

## WHAT IS AI SCHOLARS?

What do self-driving cars, Alexa, and iPhone's face recognition technology have in common? They are driven by modern advances in Artificial Intelligence. Al Scholars is a **pre-college enrichment program** that exposes curious high school students globally to Al through in-person or live online intensive classes. The program is developed and taught exclusively by **Stanford, MIT and leading university alumni** and **graduate students** specializing in Al.



Inspirit AI Program Logistics: Brains International School

## Monday June 23 - Friday July 4

Middle School Session: 12-14 High School Session: 15-18

## **Pricing:** 1,200 €

Admitted students will receive an enrollment link to secure their spot.

## Contact:

brainscamps@colegiobrains.com



# Why Al Now?

Whether you're interested in law, healthcare, art, or economics, AI is poised to transform almost every discipline and industry in the future. At the core of Inspirit AI's mission is to equip our students to lead impactful and successful careers. AI is already all around us today, and by the end of the program, students will understand the underlying concepts and motivations behind technology such as:



#### Summer Camp IA Brains



# **Inspiring IA Team**



#### DANIELA GANELIN Director of Curriculum

Education: *MIT* Master's in Computer Science (AI), *MIT* Bachelor's in Computer Science and Math, *MIT* Teaching License **Research**: Studying economic disparities in online education, diagnosing dementia with machine learning, creating AI-generated images, and improving recommendation engines.



#### ANNA SAPPINGTON Instructor

**Education**: Marshall Scholar Graduate work in Al/ML, MIT Bachelor's in Computer Science and Biology **Research**: Anna was part of multiple Al labs at MIT including Aviv Regev's lab and Sange et a Bhatia' lab. She has applied Al to genomics with the goal of mapping every cel in the human body.



#### ARTEM TROTSYUK Instructor

Education: Stanford PhD candidate in Bio engineering, Stanford Master's in Computer Science, UC Davis Bachelor's in Biology, Minors in Communication and Writing **Research**: Using bioengineering to ols coupled with artificial intelligence to improve wound healing outcomes in diabetic patients. Developing Al-powered smart bandages with a closed-loop system for personalized medicine.



#### AKSHAY JAGADEESH Instructor

Education: Harvard Medical School Post doctoral Neuroscience Fellow, Stanford PhD in Vision Science Research & Teaching: Analyzing artificial neural networks and understanding what computations the human brain performs to give rise to perception. Helped design and teach several courses at UC Berkeley and Stanford ranging from computer vision to neurobiology to the science of meditation.



# High School Curriculum (age: 14-18)



Programs run for **10 sessions of 3 hours each** on weekdays.

In the first half of the program, students learn **A's core** technologies in cluding applications, foundational concepts, and programming tools through live in-person or online classes and collaborative mini-projects.

In the second half, students complete a **mentor-led Al** for Social Good project where they apply the programming skills developed in Part 1Students also attend workshops aimed to provide inspiration for college essays and Al-related careers.



# **Our High School Program**



#### **AIFOR SOCIAL GOOD PROJECT**

Students develop fundamental AI skills and apply them to a **mentor-led group project** that they later **present** during a **final showcase**. Students gain access to an **online portal** for continuous learning after the program.



#### **AICAREERS AND VENTURES**

Students learn from **industry** and **academic guest speakers** about Al's impact in domains such as healthcare, transportation, and chat applications. Students receive guidance on pursuing various careers that involve Al.



#### PRE-COLLEGE PREPARATION

Students attend **workshops** aimed to prepare them for leading CS and AI programs internationally. Students gain inspiration from successful Stanford and MIT **admissions essays** and learning how to communicate their project experiences effectively.



# **Featured High School Projects**

Al can apply to almost **every discipline** from health to art, finance, and more. Our team of graduate students at leading U.S. universities have **diverse experiences** and will **mentor projects** in a variety of domains.

## AI + Mental Health:

#### Digital Phenotyping to Detect Schizophrenia

In this project, students will modules such as **Pandas**, **Matplotlib**, and **Scikit-leam** to examine the distribution of **smartphone sensor** and **survey data**. Students will build models that will predict depression and relapses in the hopes of initiating preemptive treatment. Along the way, students will also discuss the **ethical implications** of data gathering and erroneous predictions.

# AI + Astronomy:

#### **Searching for Exoplanets**

In this project, students will use data collected from NASA's Kepler space telescope to train AI models to detect and characterize exoplanets. Finding exoplanets could help us discover alien life! Students will also gain experience in training models with imbalanced classes of data.

#### DEVELOPED BY Peter Washington Stanford PhD Student and Researcher in AI + Accessibility



#### DEVELOPED BY Kaylie Hausknecht Harvard Astrophysics Student and NASA Intern





# **Featured High School Projects**

## AI + Healthcare: DNA Detectives for COVID-19

In this project, students create machine learning models to **trace** the geographic origins of **COVID-19** strains to help understand its spread. Students learn about the biology behind the virus and techniques for working with **genomic data**. Students also apply advanced techniques like **dimensionality reduction** for building more accurate models from complex biological datasets.

## AI + Finance:

#### **Stock Sentiment Analysis**

In this project, students use AI to **predict stock market trends** based on financial news and Tweets. Over the course of the project, students will learn about financial analysis and use state-of-the-art **Natural Language Processing models** like LSTMs and Google Gemini to make stock market predictions with high accuracy.

DEVELOPED BY Brianna Chrisman Stanford PhD in computational genomics



DEVELOPED BY Aansh Shah Brown University M.S. in Computer Science and Amazon Engineer





# Middle School Curriculum (age: 15-18)

	Session 1	Session 2	Session 3	Session 4	Session 5
Program Components	Introduction to Artificial Intelligence	Intro to Chatbots	Chatbot Lab	NLP & Ethics	Heart Disease Lab
Conceptual		Chatbots for Healthcare	Machine Learning & NLP	Social Chatbot Lab	Computer Vision
Programming Al Project Building	Intro to Python with Turtle	Chatbot Lab	Social Chatbot Lab	Machine Learning for Healthcare	Teachable Machine
	Session 6	Session 7	Session 8	Session 9	Session 10
	Assistive Tech	Project Introduction	Machine Learning Bias	Presentation Workshop	Final Project Presentations
	Computer Vision Lab	Project Work	Instructor Spotlight	Project Work	
	Self-Driving Cars Lecture & Lab		Project Work	Creating Your Al Project Workshop	Career Workshop

In this project-based program, we will explore the foundations of machine learning & explore different applications of machine learning models.

In the first half of the course, students **learn Al's core technologies** including applications, foundational concepts, & programming tools through live online lectures and coding labs.

Students will not only learn about different types of machine learning models, but also **apply those models to real data sets.** In the second half of the course, students will complete an **instructor-led group project applying Al to a particular discipline** (e.g., music, healthcare, astrophysics, finance, etc.), utilizing their new programming skills!



# **Featured Middle School Projects**



## AI + Disaster Relief

Leverage machine learning to help first responders allocate resources in crisis situations



## Al +Art

Train models to recognize and complete sketches to create interactive & accessible computer systems



## **AI + Public Health**

Use computer vision to determine whether people are wearing masks properly to improve public health



# Inspirit AI in Leading Schools

Inspirit AI collaborates with schools and districts to offer summer programs, in-school elective, after school programs taught by our experienced top university AI instructors!

Among their many collaborations include:



THE BRITISH SCHOOL MANILA

Inspirit partnered with British School Manila, a premier school in the Philippines, to bring an **after-school Al enrichment** activity to high schoolers.





## Winchester Thurston School

Inspirit collaborated with Winchester Thurston to integrate capstone projects into its innovative course "Machine Learning and the Social Implications of Al"

Inspirit worked with Sal Khan's project-based school to offer a full-year **school-day elective** in the foundations and applications of machine learning.



#### Inspiring the Next Generation of Leaders: From High School to Higher Education

Our scholars come from schools from around the world and often attend the world's most prestigious higher education institutions. Here is a snapshot of some of our students' journeys.



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