AI SCHOLARS LIVE ONLINE

ARTIFICIAL INTELLIGENCE INTENSIVE
FOR HIGH SCHOOL STUDENTS

By Stanford Alumni and Graduate Students

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Mission

WHAT IS AI SCHOLARS LIVE ONLINE?

What do self-driving cars, Alexa, and iPhone’s face recognition technology have in common? They are driven by modern advances in Artificial Intelligence. AI Scholars Live Online is a pre-college enrichment program that exposes curious high school students globally to AI through live online classes, with a student-teacher ratio of 4:1. The program is developed and taught exclusively by Stanford alumni and graduate students specializing in AI. Learn more at: www.inspiritai.com

WHY AI SCHOLARS?

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. With AI Scholars Live Online, Inspirit AI now gives students the flexibility to access our program from the comfort of their homes.
Why AI 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:

**COMPUTER VISION**
- Self-Driving Cars
- Facial Recognition
- Medical Diagnosis

**NATURAL LANGUAGE PROCESSING**
- Alexa
- Siri
- Google Home

**RECOMMENDATION ENGINES**
- Netflix
- Spotify
- Amazon

**DEEP LEARNING**
- Google Translate
- Autocorrect
- Chatbots
Worldwide Impact

We’ve had the fortune of guiding students with interests across healthcare, robotics, art, economics, journalism, and more from 30+ countries in learning fundamental AI concepts, preparing for college admissions, and applying their passions to achieve social good. 45% of our students come to the program with no previous background in CS.
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, including additional projects in a variety of domains.

**Program Outcomes**

**AI FOR SOCIAL GOOD PROJECT**

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

**AI CAREERS AND VENTURES**

Students attend workshops aimed to prepare them for leading CS and AI programs in the US. Students gain inspiration from successful Stanford admission essays and learning how to communicate their project experiences effectively.
"The Inspirit AI camp was an incredible whirlwind of information...During the two weeks when I worked on my project, I not only learned about coding, but also formed connections with three project teammates from around the world. Attending this camp helped me realize my passion for STEM, and the supportive instructors happily supplied resources for me to pursue it further!"

ALLY BUSH
Lakeside High School, Seattle
Summer 2020

"I have never attended a program that makes AI so accessible for high school students. Not only did I learn how to build various models, I also understood how they worked and how I could apply them to my own passions for history and political science. Inspirit AI has equipped me with the tools and mentors to pursue artificial intelligence further with a strong foundation."

DIVYA GANESAN
Castilleja School, Palo Alto
Summer 2020

"Surrounded by a group of welcoming instructors and peers from all around the world made me feel like I could be open and ask questions. I particularly enjoyed my time working in the Healthcare Project group, where I got to dive into the cross section of medicine and AI. I hope to return next year to expand my knowledge of AI and to use the concepts that I learned in this program to help me in my future endeavors."

ISHA JAGADISH
Saratoga High School, Saratoga
Summer 2020
Student Testimonials: In-Person

ANANYA GROVER
The Shri Ram School, Aravali
Summer 2019

“The Inspirit AI summer program helped me grasp fundamental AI concepts in a surprisingly short amount of time. In addition to coding, I broadened my perspective dwelling on ethical questions directly from people working on them. At the intersection of my passions for tech and journalism, I got to work on a fake news detection AI model!”

TARUN PAPARAJU
Greenwood High International School, Bangalore
Summer 2019

“The camp was a fantastic experience because I had the opportunity to meet so many instructors with experience in AI research and industry. I also met a lot of fellow students with similar passions as mine. Moreover, I learned the importance of socially impactful AI and AI ethics during the camp”

AASHI TYAGI
Emirates Academy, Dubai
Winter 2019

“Our instructors Tyler and Sandra did an excellent job equipping us with the knowledge needed to become stalwarts in the field of Artificial Intelligence. They made sure that we never left class with any doubts or questions. I feel like the program has equipped me with the skills I need to be a part of the future.”
Our 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.

ARTEM TROTSYUK
Instructor

Education: Stanford PhD candidate in Bioengineering, Stanford Master’s in Computer Science, UC Davis Bachelor’s in Biology, Minors in Communication and Writing

Research: Using bioengineering tools coupled with artificial intelligence to improve wound healing outcomes in diabetic patients. Developing AI-powered smart bandages with a closed-loop system for personalized medicine.

ANNA SAPPINGTON
Instructor

Education: Marshall Scholar Graduate work in AI/ML, MIT Bachelor’s in Computer Science and Biology

Research: Anna was part of multiple AI labs at MIT including Aviv Regev’s lab and Sangeeta Bhatia’s lab. She has applied AI to genomics with the goal of mapping every cell in the human body.

inspiritai.com/team
**Our Team**

**AKSHAY JAGADEESH**  
Instructor  
*Education:* Stanford PhD in Vision Science, UC Berkeley Bachelor’s in Computer Science and Cognitive 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.

**GRETA FARRELL**  
Curriculum Developer  
*Education:* MIT Bachelor’s in Economics  
*Teaching:* Has experience student-teaching in a variety of schools: urban, rural, suburban, as well as public, charter, private, and boarding. Before joining Inspirit as a curriculum developer, she taught middle and high school math from pre-algebra to pre-calculus and developed mastery-based curricula at the Khan Lab School.

**CHRIS PIECH**  
Faculty Advisor  
*Education:* Stanford PhD in Artificial Intelligence, Stanford Bachelor’s in Computer Science  
*Research & Teaching:* Assistant Professor of Computer Science at Stanford, teaching introductory programming, probability, and artificial intelligence courses. Faculty advisor for the Stanford course, “Artificial Intelligence for Social Good.”

[inspiritai.com/team](http://inspiritai.com/team)
Teaching Principles

Student Teacher Ratio of 4:1
With a student-teacher ratio of 4:1, students receive personalized instruction and guidance online, meeting during their designated time slot and communicating through video and chat.

Design-Thinking Approach
Students participate in design-thinking games to stimulate creativity, cross-disciplinary thinking, and contextual problem solving.

Project-Based Collaboration
Students dynamically interact with material in close-knit teams to build socially impactful solutions, leading to an overall rich social experience in the virtual context.
Program Dates

Programs run for 10 sessions of 2.5 hours each during the Spring Semester and Summer break.

All sessions are in Pacific Standard Time.

**SPRING SEMESTER**

**SATURDAY COHORTS:** (10 weeks)
April 3rd – June 5th

**SUNDAY COHORTS:** (10 weeks)
April 4th – June 6th

**TIMES**
8:00am – 10:30am
12:30pm – 3:00pm

**SUMMER BREAK**

**WEEKDAY COHORTS:** Monday – Friday (2 weeks)
- June 7th - June 18th
- June 21st - July 2nd
- July 5th - July 16th
- July 19th - July 30th
- August 2nd - August 13th

**WEEKEND COHORTS:** Saturday – Sunday (5 weeks)
- May 8th - June 6th
- June 12th - July 11th
- July 17th - August 15th

**TIMES**
8:00am - 10:30am
12:30pm - 3:00pm
7:00pm - 9:30pm *Weekday Only*
Application Details

Apply at www.inspiritai.com

DEADLINE

Spring and Summer Programs: March 31st, 2021

STUDENT BACKGROUND

High school students grades 9 — 12
No programming experience required
Advanced cohort placement available
Students with all interests are encouraged to apply!

SHORT ANSWER QUESTIONS

1. Why are you interested in joining the Inspirit AI Scholars program? (150 words)
2. Describe an AI project you would like to work on. (Optional)

PROGRAM FEE

Program fee is $900 for admitted students via secure online payment.

There is no application fee.
AI For Social Good Project Tracks

**AI + HEALTHCARE**
E.g., With computer vision, diagnosing patients based on medical scans such as X-rays.

**AI + SUSTAINABILITY**
E.g., Using AI to efficiently place energy creating sources (wind, solar, gas) across a country to maximize coverage.

**AI + MOBILITY**
E.g., Applying AI to create a safe and synchronized auto pilot system for cars.

**AI + ETHICS**
E.g., Leveraging machine learning to predict returns of portfolios and create optimal combinations of assets.
Featured Projects

AI 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-learn 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.

Developed by
Peter Washington
Stanford PhD Student and Researcher in AI + Accessibility

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
Kaylie Hausknecht
Harvard Astrophysics Student and NASA Intern
Featured 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.

DEVELOPED BY
Brianna Chrisman
Stanford PhD Student and Researcher in computational genomics

AI + Finance:
Algorithmic Trading

In this project, students use machine learning for algorithmic trading in financial markets with techniques from unsupervised learning, supervised learning, and reinforcement learning. Students build skills in Numpy, Pandas, Scikit-learn, and Keras. At the end of this project, students will have a model that they can actually use to trade stocks and build a portfolio!

DEVELOPED BY
Aansh Shah
Brown University M.S. in Computer Science and Amazon Engineer
Curriculum: Part 1

In the first half of the program, students learn AI’s core technologies including applications, foundational concepts, and programming tools through live video classes and collaborative mini-projects.

SAMPLE SCHEDULE

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<thead>
<tr>
<th>SESSION 1</th>
<th>SESSION 2</th>
<th>SESSION 3</th>
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PROGRAM COMPONENTS

- APPLICATIONS
- CONCEPTS
- PROGRAMMING
In groups of 4-5, students complete a *mentor-led AI for Social Good project* where they apply the programming skills developed in Part 1. Students also attend virtual workshops aimed to provide inspiration for *college essays* and AI-related careers.

**SAMPLE SCHEDULE**

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<thead>
<tr>
<th>SESSION 6</th>
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<td><strong>Case Study: AI in</strong></td>
<td><strong>Mentor-led Project</strong></td>
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<td><strong>Digital Poster</strong></td>
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**PROGRAM COMPONENTS**

- **APPLICATIONS**
- **COLLEGE PREP**
- **PROJECT BUILDING**
College Preparation

Students attend online workshops that will help prepare them for competitive university programs and admissions.

COLLEGE ESSAY WORKSHOP

COMPUTER SCIENCE / ARTIFICIAL INTELLIGENCE AT UNIVERSITY

COLLEGE ADMISSIONS PANEL
Online Portal

Students gain access to our online portal for use during and after the program.

ELEMENTS OF ONLINE PORTAL

- Quizzes on AI concepts
- Coding exercises
- 12+ AI projects in healthcare, transportation, biology, media, and more
Contact Info

QUESTIONS?

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