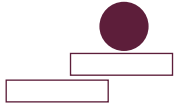
ARCUS ADVISORY
UNIVERSITY CONSULTANTS

ARCUS ADVISORY AI PROGRAM

An AI program for ambitious high school students.
Designed and run by Harvard graduate students & alumni.

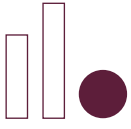
ARCUS ADVISORY
UNIVERSITY CONSULTANTS

WHY LEARN AI IN HIGH SCHOOL?



Build foundational skills

The earlier you can build foundational skills in AI, the deeper you'll be able to create projects that matter for the world.



Stand out for college

When you build an independent project using AI, you showcase your abilities, interests, and potential to impact the real world.

Solve real world problems

AI is being used to solve some of the biggest challenges facing humanity today - in fields from healthcare to climate change. With your project, you have a chance to contribute to the larger solutions.

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

OUR MENTORS

Our AI mentors are world-class researchers and practitioners. Here are some mentor profiles.

DASH
MS in Data Science
Harvard University

PATRICK
PhD in Engineering
& Public Policy
Carnegie Mellon University

GINA
PhD in Biophysics
Stanford University

KRTI
PhD in Biosciences
Stanford University

YIQIAO
PhD in Statistics
Columbia University

EMILY
PhD in Statistics
University of Michigan

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

WHAT YOU CAN CREATE

Your AI project should reflect your unique capabilities. Some of the fields you can explore include:

AI in Gaming

Create a responsive video game experience

AI & Healthcare

Use convolutional neural networks to classify medical images

AI & Climate Change

Use convolutional neural networks to predict carbon dioxide emissions

AI and Sports

Use computer vision to predict the outcomes in major sports leagues

AI & Finance

Predict stock prices using deep learning

AI & Political Science

Create an algorithm to detect propaganda in speeches

AI & Education

Create a voice assistant to make education more personalised & increase accessibility

AI & Mental Health

Use natural language processing to create a mental health chatbot to detect depression/anxiety

OUR PROGRAM	AI SCHOLARS	AI FELLOWSHIP WITH PUBLICATION & SHOWCASE	AI ACCELERATOR
Structure	Group classes with 5:1 student to mentor ratio	1-1 mentoring with an AI expert. 1-1 mentoring with a publication expert	1-1 mentoring with an AI expert
Duration	25 hours over 10 weeks (weekends) OR 25 hours over 2 weeks (weekdays on summer break)	15, 1-1 sessions with a mentor. 2 sessions with a publication expert	30, 1-1 sessions with a mentor
Student Profile	Grades 9-12	Grades 9-12	Grades 9-12
Pre-requisites	None	Basic understanding of python/completion of AI Scholars	Basic understanding of python/completion of AI Scholars
Output	A group project with 3-4 other students	• A novel of AI model in a field of your interest • Personalized mentor evaluation • Publication submission to a high school or college-level research journal OR showcase through presentation/competition submission	• Independent research paper in the field of AI • Submission to college level research journal or CS/Science competition (e.g., ISEF Regeneron • Personalized mentor evaluation and 4 1-1 sessions with publication expert

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

AI SCHOLARS: A CRASH COURSE IN AI

- 10 week bootcamp
- Learn the fundamentals
- Explore a variety of AI applications
- AI project with a mentor
- Conducted entirely online

Weeks 1 & 2: Build a foundation in Python used for AI and understand how to execute a data science project

Weeks 3-5: Receive an introduction to key topics in AI - including regression, neural networks, and natural language processing

Weeks 6-10: Deep dive into some more complex topics (e.g. CNN, Sentiment Analysis)

Some of the material we cover includes:

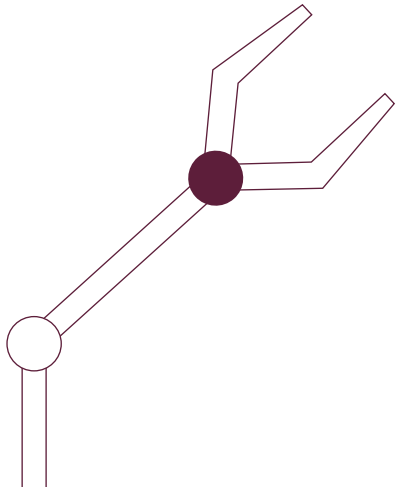
- Image classification
- Neural Networks
- Deep Learning
- NLP & Language Processing
- Sentiment Analysis
- Why AI Ethics matter

We also give you a chance to explore AI in academic research and understand how AI experiences add to your college applications.

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

AI FELLOWSHIP

• 15 weeks of work + 1-4 months of publication submission
• Dig deep into your interests
• Achieve mastery
• Independent AI project at a college level
• Conducted entirely online



Month 1: Exploration & Learning Phase
Learn the key concepts in fields you're curious about, including identifying the question of interest and the required machine learning model.

Month 2: Ideation & Data Exploration
Being analysis of the data and work with your mentor to assess the feasibility of the project and the resources available.

Month 3-4: Execution Phase
Work on creating your end project. Use 1-1 time with your mentor to troubleshoot any problems you face with your code and build further on your ideas. At the end of the program, you get a chance to present your project to your peers.

Months 4+ : Publication Phase
Work with our publication team to submit your work to a publication, science competition, or tech-oriented journal. Showcase your work publicly.

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

AI ACCELERATOR

- 30 weeks of work + 1-4 months of publication submission
- Dig deep into your interests
- Achieve mastery
- Independent AI research paper at college level
- Conducted entirely online

Month 1: Exploration & Learning Phase
Identify the question of interest, dataset and required machine learning model.

Month 2: Ideation & Data Exploration
Begin analysis of the data and work with your mentor to assess the feasibility of the project and the resources available.

Months 3-6: Execution Phase
Work on creating your end project. Use 1-1 time with your mentor to troubleshoot any problems you face with your code and build further on your ideas. At the end of the program, you get a chance to present your project to your peers.

Months 6+: Publication Phase
Work with our publication team to submit your work to a publication, science competition, or tech-oriented journal. Showcase your work publicly.

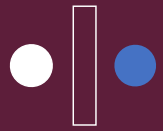
ARCUS ADVISORY
UNIVERSITY CONSULTANTS

HOW WE SUPPORT YOU

Learning AI is hard. Here's how we help.

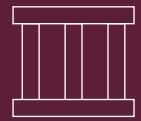
Expert Instruction

We help you understand AI from both the fundamentals and application level of why it works.



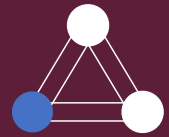
Direct Mentorship

We work with you closely to make sure you don't get stuck and you can build your own AI project.



College Preparation

College is right around the corner. We help you think about how to use your project for college applications through workshops and seminars.



AI Community

You connect with a community of like-minded peers who are passionate about AI.

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

FAQS

? Are the programs online or in-person?

> Classes are held online via Zoom, while class materials are uploaded and available on Google Classroom.

? What is the difference between the AI Fellowship and the AI Accelerator ?

> AI Accelerator is for students who would like to make AI a core part of their high school experience and who are interested in national level competitions and publications.

? What is the combination program?

> The combination program is for students who want to do both the AI Scholar and AI Fellowship program. This is a good fit for students who want to make AI a deep experience for them and who would also like to build up some of the fundamentals of AI before/while diving into their individualized project.

ARCUS ADVISORY
UNIVERSITY CONSULTANTS

FAQS

? Is publication guaranteed in the Fellowship with Publication and Showcase Program?

> In the fellowship & publication program, we will help you identify and submit to a high school or college level research publication or competition. However, as these publications are external to us, we can not guarantee publication (no program should!)

? Can you ask your mentor for a letter of recommendation?

> Yes! You can definitely ask your mentor for a letter of recommendation. However, it is up to their discretion whether or not they will write it.

? Do you offer make-up classes?

> We do not offer make-up classes, but students will have access to class recordings in case they are unable to attend a session.

ARCUS ADVISORY

UNIVERSITY CONSULTANTS

APPLY NOW

For enquiries, please contact Susie Cochin de Billy at:
susie@arcusadvisory.com