AI FOR GOOD INSTITUTE

AT STANFORD UNIVERSITY

13 JULY – 11 AUGUST 2024

Last updated: 28 May 2024

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REIMAGINE YOUR FUTURE

Do you:

- Want to make a career transition into AI-driven high-impact fields?
- Have an idea for an AI product or venture?
- Want to launch an AI startup?
- Dream of a lucrative + fulfilling career?
- Want to gain financial independence?
- Want to make a *difference* through technology?

Do more than "ride the AI wave."

Lead the way *intentionally, on your terms.*

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AI FOR GOOD INSTITUTE AT STANFORD UNIVERSITY

immersive, four-week professional education program bridging applied AI /ML fundamentals, startup innovation, and human-centered AI

Designed for aspiring AI for Good professionals, innovators, and startup founders.

Duration: Four weeks

Dates: Sunday 13 July to Sunday 11 August 2024

Format: Hybrid

- Part one: 13 July – 3 August: Online, part-time (weekends/ evenings)
- Part two: 4 - 11 August: In-person, full-time at Stanford

WHAT IS "AI FOR GOOD?"

AI for Good leverages artificial intelligence technologies to address the world's greatest challenges, aligning solutions with the UN Sustainable Development Goals (SDGs).

An AI for Good startup is a social venture that embeds a commitment to advancing social good as a core KPI alongside profitability and leverages AI in its product or operations.

PROGRAM ACTIVITIES

Participants will:

- **Engage in hands-on** workshops, labs, and project work throughout the program.
- **Apply** AI and Machine Learning algorithms to build a data science prototype for social good.
- **Develop** an AI startup idea with an interdisciplinary project team in high-growth, high-impact fields like tech safety, sustainability, healthcare, or ed-tech.
- **Apply** the business fundamentals of AI startup development from design to marketing, finance, and strategy.
- **Analyze** AI ethics, human-centered AI, and AI policy frameworks.
- **Pitch** an AI startup idea to Silicon Valley VCs and tech experts, gaining invaluable feedback for real-world application.

REAL LIFE PROJECTS

- Interdisciplinary teams develop an AI for Good project that includes a technical and business component
- Project domain ideas in 2024: High-impact, high-growth, high-reward fields
  - Tech Safety
    - Cybersecurity, Privacy, Ethics
  - Sustainability
    - Renewable energy, climate, disaster management
  - Healthcare
    - Mental health and wellness, biotech
  - Education Technology
    - K-12, HED, inclusive learning, personalized learning

REAL LIFE PROJECTS

- Teams develop a pitch deck to present to real Silicon Valley VCs and mentors for live feedback at the end of the program.
- Pitch decks include:
  - Data Science Solution (Concept/ Prototype)
  - Startup Venture Pitch (Design, Product Market, Finance, Strategy)
  - AI Ethics and Human-Centered AI Considerations

IDEAL APPLICANTS:

- Higher education students hoping to launch careers in AI and innovation.
- Aspiring or early-stage entrepreneurs seeking to:
  - Launch high-impact AI for Good Startups
  - Make a difference in critical fields like technology, sustainability, education, or healthcare
- Professionals from non-technical/ technical backgrounds who want to:
  - Drive AI innovation for social good
  - Enter the Tech for Social Impact/ Human-Centered AI/ AI Ethics/ Policy spheres

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CURRICULUM HIGHLIGHTS

- **AI/ ML Hands-on Learning**
  - Learn from AI/ ML industry experts, Stanford educators, and CS alumni.
  - Advance your AI/ ML skills with live hands-on workshops and curated labs.
  - Create a data-science prototype with TA and project advisor support.
- **Startup Innovation & Entrepreneurship**
  - Develop an AI for Good Startup applying business + social innovation concepts.
  - Utilize the Startup Canvas and other frameworks to create a pitch deck covering product design, marketing, finance, impact strategy, and more.
  - Deliver the pitch to Silicon Valley VCs and mentors.
  - Deeply analyze the balance between impact + profitability in the social good space.
- **AI Ethics and Policy Analysis**
  - Hear from thought leaders on AI Ethics, AI Policy, and Human-Centered AI
  - Analyze global AI policies and ethics frameworks.
- **Networking & Community Building**
  - Connect with a diverse cohort of AI innovators and like-minded peers.
  - Participate in exclusive networking events with VCs, tech leaders, and mentors.

OUTCOMES

By the end of the program, you will gain:

Skills for success

- Be prepared to launch an AI for Good startup
- Understand how to build AI products that succeed
- Practice pitching an AI startup
- Deeply understand the balance between impact and profitability in AI for Good
- Understand human-centered AI, ethical AI, and AI policy trends
- Gain actionable skills to accelerate your career in AI and innovation

Credentials and network

- Earn a Professional Certificate from the AI for Good Institute™ at Stanford
- Earn a Verified Digital Badge as an "AI for Good Professional" or "AI Innovation Specialist“ to enhance your LinkedIn profile
- Develop an AI portfolio that makes you stand out to recruiters and tech companies
- Access a community of like-minded AI innovators, investors, and professionals

WHAT MAKES US DIFFERENT?

- Unique approach that blends social innovation with technical AI and business skills.
- Unlike typical professional courses that focus on limited concepts and pre-recorded content in AI, business, or policy:
- The AI for Good Institute offers a live, comprehensive curriculum that integrates applied ML, AI startup innovation, ethics, and impact strategy.
- We empower ambitious social innovators with the skills to launch successful AI for Good startups, address common startup pitfalls, and achieve impact and financial viability.

WHY THIS MATTERS?

AI has the potential to accelerate progress across all 17 Sustainable Development Goals (SDGs).

We must bring more AI for Good solutions to the real world now.

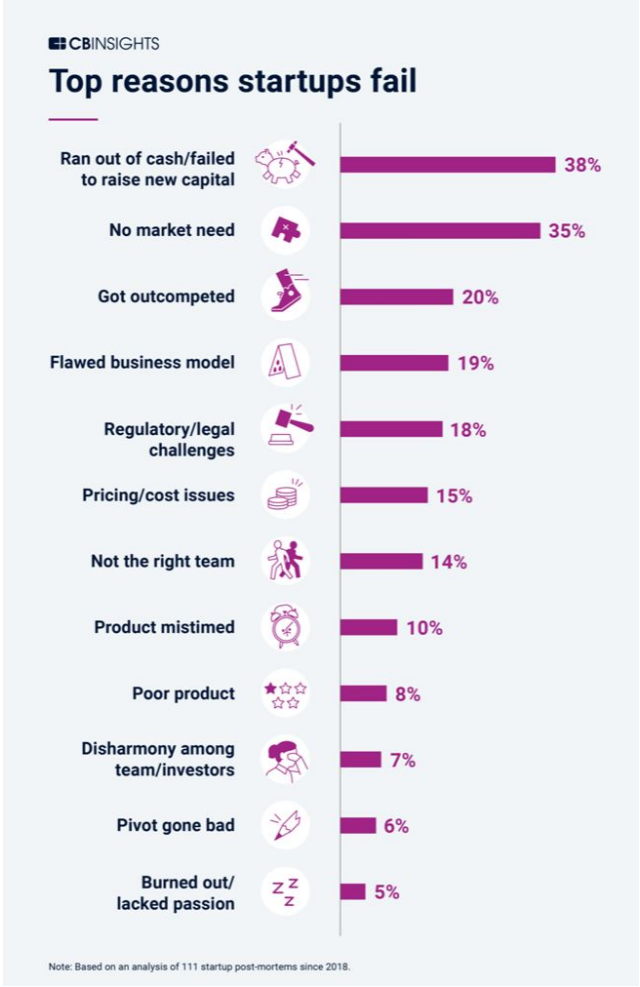
Scaling AI for Good Startups, Ventures, and Products.

But 90% of AI Startups are failing.

STATISTICS: WHY DO AI STARTUPS FAIL?

Sources:

- *CB Insights Report, 2021*
- *Skynova Report, 2022*



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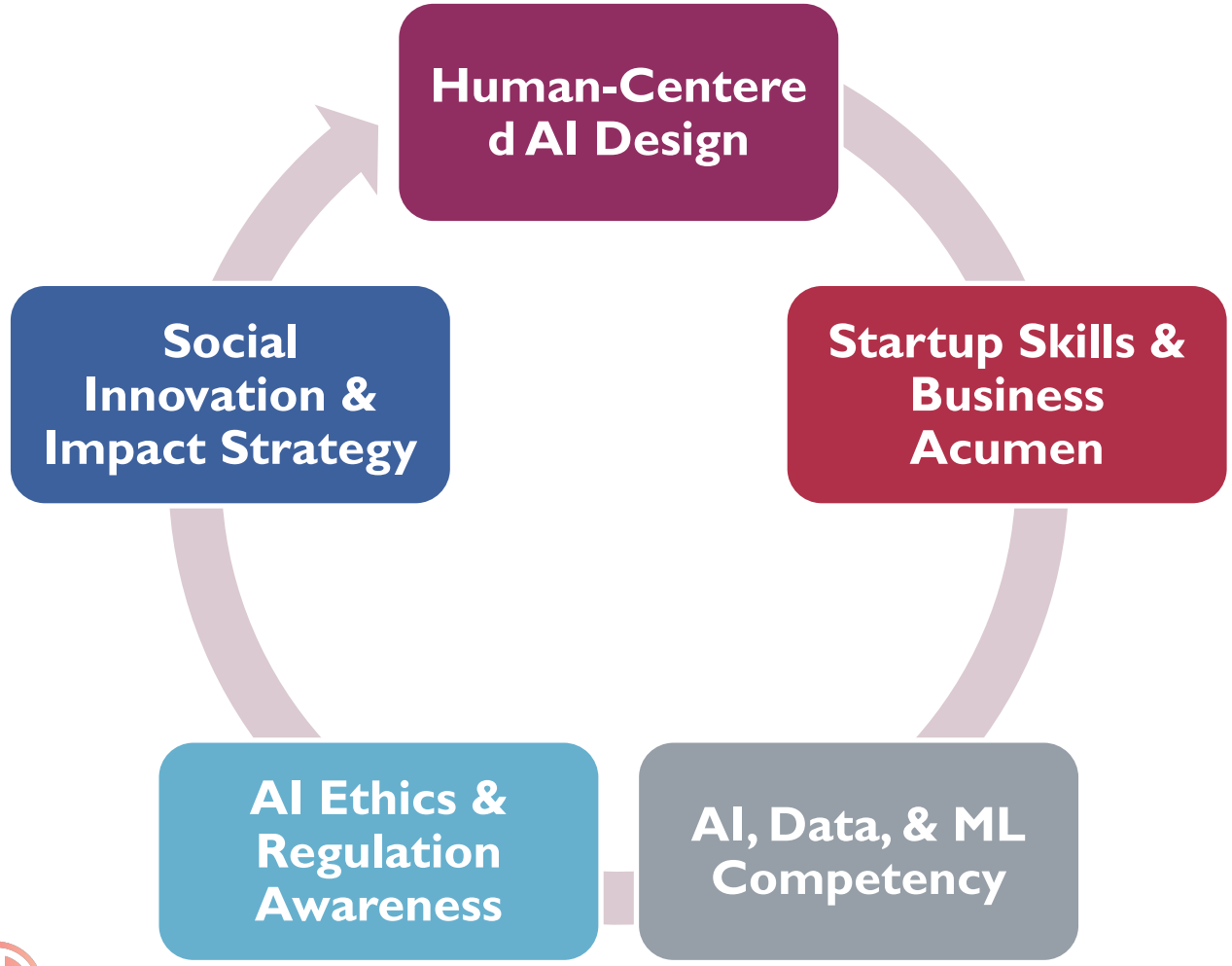
We empower AI for Good founders with the skills and tools to scale both impact and financial success.

Unique approach that blends social innovation with technical AI/ ML training and business training from the best minds in Silicon Valley.

OUR JOURNEY IN SOCIAL ENTREPRENEURSHIP

UNITED AMBASSADORS



AI FOR GOOD INNOVATION REQUIRES

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AI FOR GOOD INNOVATION REQUIRES:

Human-Centered AI Design	HAI design leverages **interdisciplinary** teams. It emphasizes the need to deeply consider the impact on users, community, and society and engage all stakeholders early and often.
Startup Skills & Business Acumen	Business strategy is a core requirement in bringing AI or Good solutions to the real world. Most AI solutions fail for business reasons like financing, product-market fit, and competition. Social good tech startups navigate added layers of complexity. Powerful entrepreneurship skills are required to achieve success across the tech, social good, and business domains.
AI, Data, & ML Competency	Technical expertise is required throughout the AI development lifecycle. Software engineers and data scientists must collaborate with stakeholders to successfully drive an AI for Good solution. Defining the problem statement, setting project parameters, data sourcing, model training, and deployment all require collaboration across the ecosystem.
AI Ethics & Policy Awareness	Ethical AI is foundational in AI for Good. Practitioners must prioritize privacy, transparency, and explainability. Ensuring the solution achieves a positive impact and avoids unintended harm is central to building trust and achieving the project goals. AI for Good projects often fall in highly regulated industries or across borders. Industry regulation and international implementation require thorough AI policy and compliance planning.
Social Innovation & Impact Strategy	A solid social innovation strategy is required to effectively address the world's greatest challenges. This strategy includes leveraging expert insight to deeply understand the problem space and SDG targets. It is important to develop an impact strategy that defines how impact will be achieved, measured and demonstrated to stakeholders. Maintaining an agile, iterative approach to course correction rapidly and effectively is also important.

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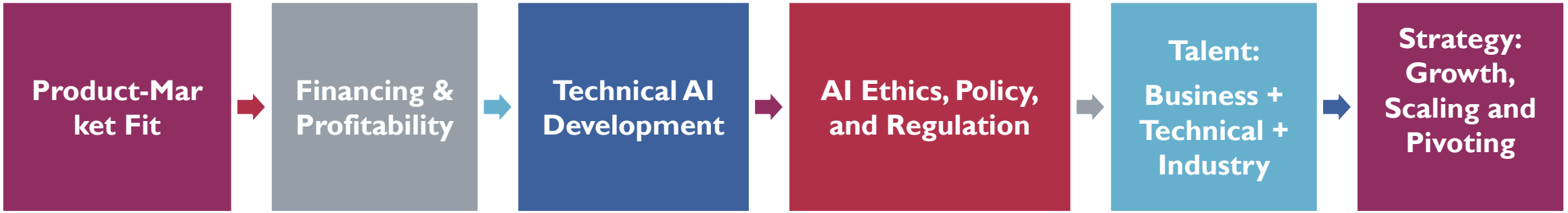
AI FOR GOOD STARTUPS – UNIQUE CHALLENGES & SOLUTIONS



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AI FOR GOOD STARTUPS – UNIQUE CHALLENGES & SOLUTIONS

Product-Market Fit

AI for Good startups navigate the "product-market fit challenge with added layers of complexity.

Startups often struggle because their product does not adequately meet market needs, or they fail to adapt their product based on customer feedback and market demand, creating a "solution in search for a problem". Many tech startups also fail due to competition.

AI for Good startups must also consider the success of their solution in addressing SDG metrics and impact, in addition to serving their users.

Financing, & Profitability

Balancing impact with profitability presents unique challenges in the social good space.

Many AI startups fail due to insufficient funding to sustain operations until they can generate profitable revenue streams. AI for Good startups must also balance impact with profitability.

Technical AI Development

AI startups often face significant technical challenges, such as developing algorithms that perform well in real-world conditions or scaling AI solutions effectively. A common pitfall is to overestimate what AI can do, leading to products that underdeliver

AI Ethics, Policy, and Regulation

AI for Good startups must be **in the lead of ethical AI advocacy and implementation.** They must also navigate complex policies in highly regulated industries like healthcare.

A **comprehensive data strategy** must be adopted around data privacy, bias in AI algorithms, and transparency. Failing can hinder trust and adoption. **A comprehensive industry regulations compliance strategy** must also be built (ex: FDA).

Talent

Business + Technical + Industry

AI for Good Startups must build diverse, interdisciplinary teams combining the necessary blend of **technical**, **business**, and **industry** expertise. This is critical to ensure successful product strategy, design, and execution.

Strategy: Growth, Scaling and Pivoting

AI for Good startups must develop defensible, durable impact strategies, on top of effective growth, scaling, and pivoting strategies. Regular startups fail due to a flawed scaling strategy, operational and resource management challenges, and failure to pivot effectively amidst changing market dynamics or new insights

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MEET THE TEACHING TEAM

**Growing rapidly.*
Visit: impactgenius.ai/teaching-team

Nabila Elassar

- Founder & Academic Director, Impact Genius
- Social entrepreneur since 2013
- Ex-Microsoft Product, Strategy
- 12+ yrs. curriculum & instructional leadership
- MA, Education, Policy Stanford
- BA in Business Administration & Management Technology, GUC

Oumaima Makhlouk

- Data Scientist, Intel
- Data Focal Point, UN MGCY
- (UN Major Group for Children and Youth)
- MA, Mechanical Engineering, MiT
- MSc/BSc, Mathematics, ParisTech

Younes Bensouda Mourri

- Founder, Livetech AI
- AI/ ML Course developer: $1.4 million learners worldwide
- CS129 Co-Lecturer, Stanford University (w. Professor Andrew Ng)
- Generative AI Instructor/ Consultant: ASML, CISCO, BCG

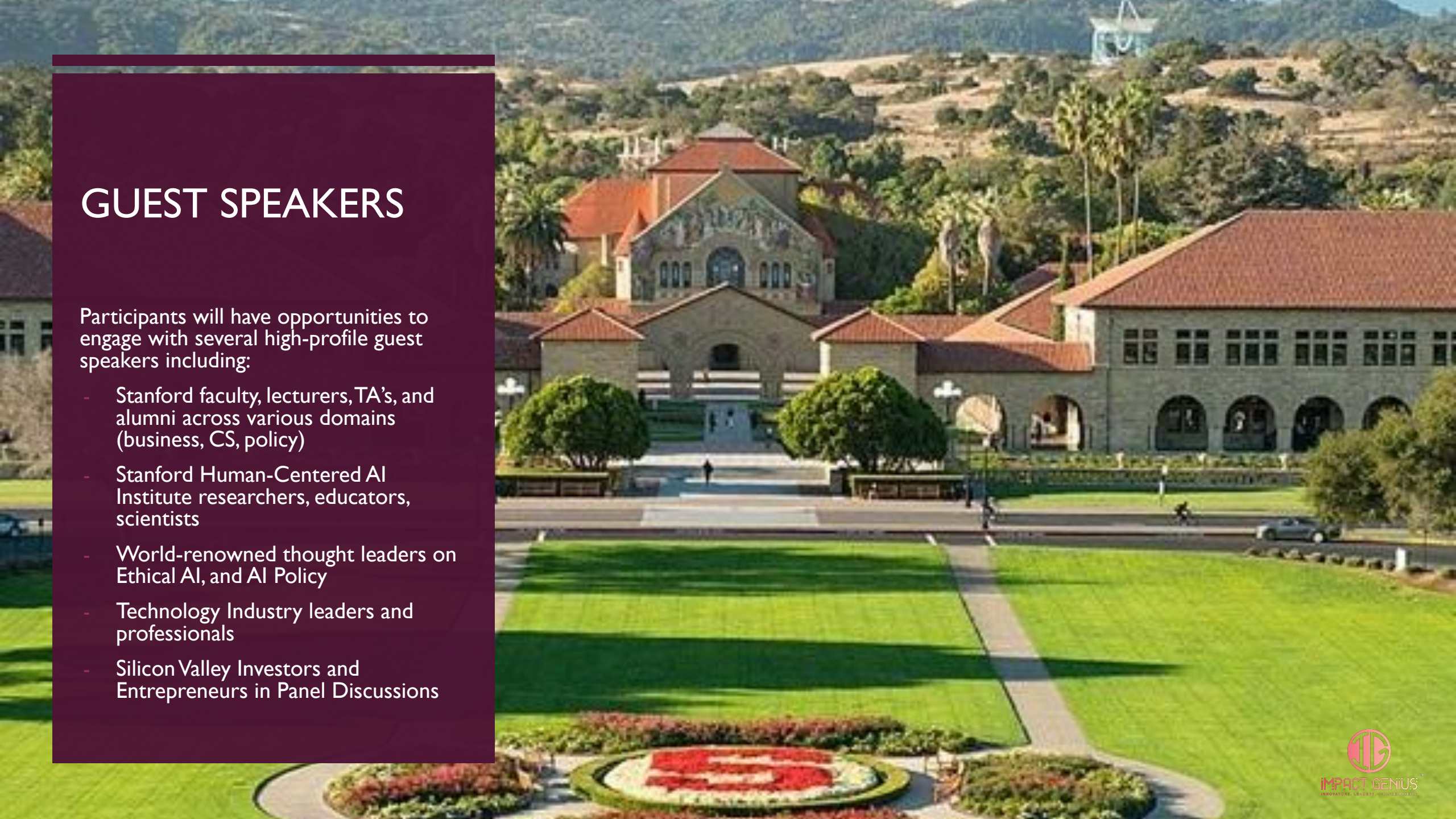
Abdulwahab Omira

- BA in Computer Science (AI), Stanford University
- Teaching Assistant for CS 106A, CS 106B, and CS 198, Stanford University
- Experience developing and launching $million+ AI for Good real-world projects

GUEST SPEAKERS

Participants will have opportunities to engage with several high-profile guest speakers including:

- Stanford faculty, lecturers, TA's, and alumni across various domains (business, CS, policy)
- Stanford Human-Centered AI Institute researchers, educators, scientists
- World-renowned thought leaders on Ethical AI, and AI Policy
- Technology Industry leaders and professionals
- Silicon Valley Investors and Entrepreneurs in Panel Discussions



SPEAKERS/LECTURERS

**Growing rapidly.*
Visit impactgenius.ai/speakers

Peter Norvig
- Distinguished Education Fellow, Stanford Institute for Human-Centered AI
- AI Research Scientist, Google Inc.
- Speaker/ Lecturer: AI for Good Institute, 2024

Mehran Sahami
- Tencent Chair of the Computer Science Department, Stanford University
- James and Ellenor Chesebrough Professor and Senior Fellow, by Courtesy, at the Freeman Spogli Institute for International Studies
- Speaker/ Lecturer: AI for Good Institute, 2024

Juan Lavista Ferres
- Chief Scientist and Lab Director, Microsoft AI For Good Research Lab
- Co-author: AI for Good book.
- Speaker/ Lecturer: AI for Good Institute, 2024

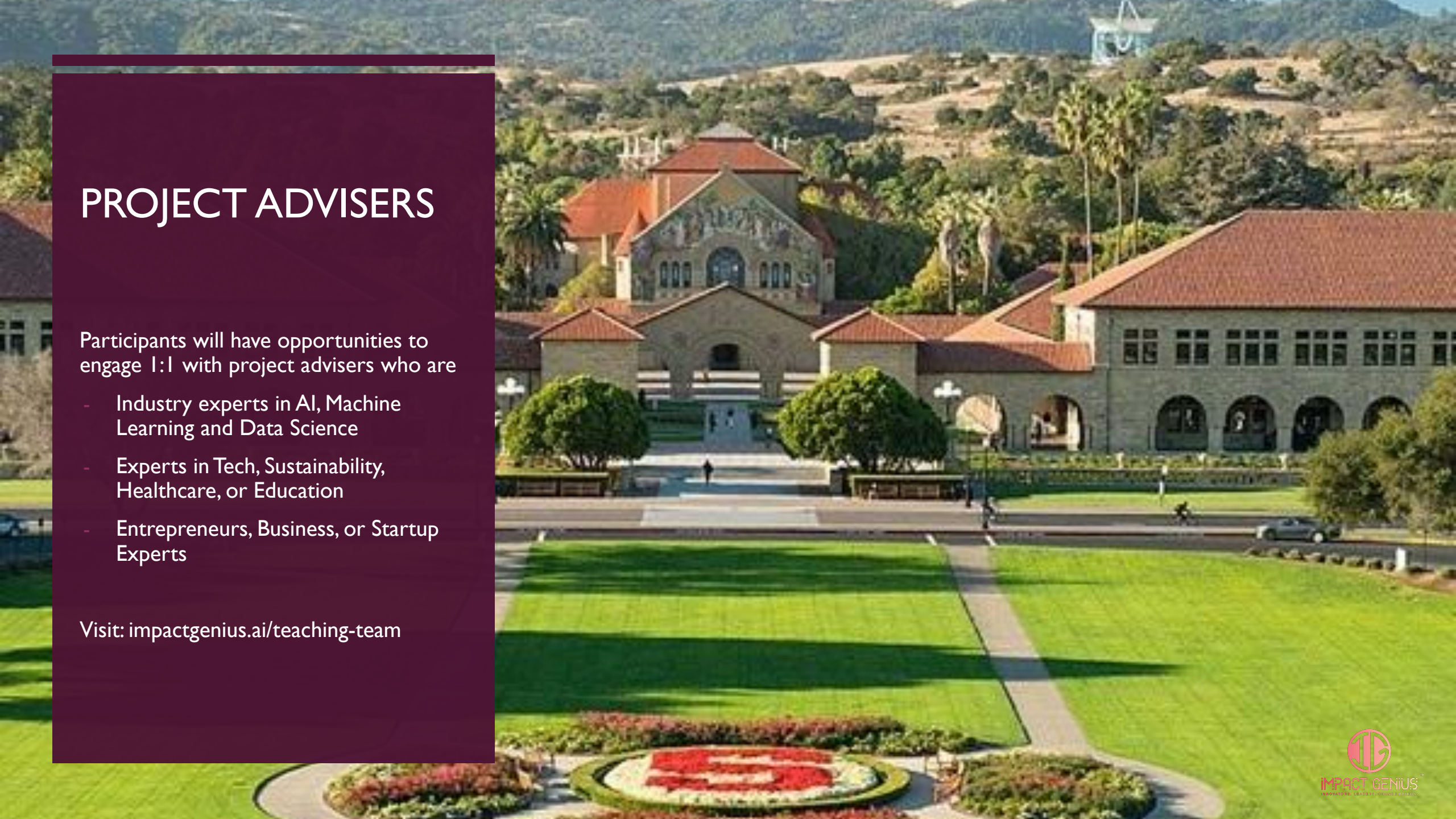
Ahmad Rushdi
- Senior Manager of Research Communities, Stanford Institute for Human-Centered Artificial Intelligence (HAI)
- Speaker/ Lecturer: AI for Good Institute, 2024

PROJECT ADVISERS

Participants will have opportunities to engage 1:1 with project advisers who are

- Industry experts in AI, Machine Learning and Data Science
- Experts in Tech, Sustainability, Healthcare, or Education
- Entrepreneurs, Business, or Startup Experts

Visit: impactgenius.ai/teaching-team



SCHEDULE & CURRICULUM

13 JULY – 11 AUGUST 2024

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COURSE/ SESSION HIGHLIGHTS

**Not the final curriculum*
**Not presented in chronological order*
****Subject to change***

AI/ ML for Business Leaders

Intro to the AI Landscape
- History of AI, Data Science Fundamentals

Machine Learning
- Supervised Models, Unsupervised Models

Hands-on: Building AI projects:
- Sourcing and cleaning data, Leveraging APIs/ low-code
- **Hands-on: Getting AI Algorithms to Work**
- Bias/ Variance trade-off. Error/ ablative analysis. Cross-validation

Deep Learning and Neural Networks
- Architectures, training techniques

Natural Language Processing
- Text Processing, QA, Chatbots, Summarization

Computer Vision
- What is "Vision"? ImageNet, CNNs

Generative AI
- Text, Image, Video Generation

Intelligent Robotics
- kinematics, AI integration

Experiences:
- Live ML labs and TA office hours
- *AI/ ML Project for Social Good (MVP)

Entrepreneurship & Innovation

The ABCs of Social Innovation
Personal Strengths
Avoiding common AI startup pitfalls
The Design Thinking Framework
Empathize
- Define
- Ideate
- Prototype

The Startup Canvas:
- Product: Design, UX/ UI, Lifecycle
- Marketing, Value Props, GTM
- Financing & Business Models

Bringing it All Together: Impact and Growth Strategy
Communications Bootcamp: How to pitch your AI Startup

Experiences:
- Hands-on Workshops
- Applied project work
- Guest speakers
- Entrepreneurship Panel
- VC (Investor) Panel
- Networking Event
- Startup Pitch

AI Ethics and Policy

AI Ethics Frameworks
- Fairness, Transparency, Security, Privacy

Human-Centered AI
- What is HAI?
- Exploring the HAI Canvas
- Evaluating impact to users, communities, and society

AI Policy and Global Governance
- Regulatory Bodies and Frameworks
- UN High-Level Advisory Body Interim Report

Generative AI:
- Ethics and Policy Considerations

Robotics:
- Ethics and Policy Considerations

Experiences:
- Guest Speakers

STEP BY STEP: HOW THIS VISION COMES TO LIFE

Stage 1

- **Stage 1: Foundations**
- AI/ ML Technical Fundamentals
- Hunan-Centered Design Thinking
- AI for Good Startup Innovation
- Present project ideas
- Vote on project ideas

Stage 2

- **Stage 2: Build/ Design**
- Align your IKIGAI with the problem and project
- Form Project Teams
- Teams begin developing data science project prototypes (technical)
- Complete the Design phase in the IG Startup Framework
- Conceptualize the "minimum viable product" for the AI for Good Startup (business)

Stage 3A

- **Stage 3: Welcome to Stanford:**
- **Startup:**
- Rigorous in-person business/ startup training
- PRODUCT - MARKET FINANCE - STRATEGY
- Panels & guest speakers.
- Project work
- Finalize pitch

Stage 3B

- **Stage 3: Welcome to Stanford:**
- **Technical/ HAI**
- Lectures on AI/ ML industry applications in AI for Good
- Ethics, Policy, HAI Guest lectures
- TA workshops on how to integrate key technologies into your product

Stage 4

- **The Big Day!**
- **Pitch your Startup** to real VCs and mentors
- Attend an exclusive networking event
- **Graduate from the AI for Good Institute**

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WEEK 1	WEEK 2	WEEK 3	WEEK 4					
ONLINE			IN-PERSON AT STANFORD					
AI/ ML: TECHNICAL OVERVIEW			**AI/ ML: INDUSTRY APPLICATIONS**					
Outcome: Develop Data Science Prototype			**Outcome**: Finalize/ improve technical project component			Review		
100% Live Lectures + **TA Labs + Project Office Hours**			100% Live Lectures + TA Labs + Project Office Hours			Lock in technical projects		
Intro: Artificial Intelligence	Deep Learning/ Neural Networks	Intro to Generative AI	Computer Vision Applications	Generative AI Applications	Intelligent Robotics Applications	**STARTUP**	**COMMS BOOTCAMP How to pitch your startup**	**THE "BIG DAY"**
Machine Learning	Computer Vision	Generative AI + Robotics				Founders Panel Tech Investment Panel		
Intro to Deep Learning	Natural Language Processing	Review						
								FINAL PITCH + NETWORKING EVENT + GRADUATION CEREMONY
HUMAN-CENTERED AI, ETHICS, POLICY			**HUMAN-CENTERED AI, ETHICS, & POLICY**			Impact Strategy Defining success		
AI Ethics Overview	Human-Centered AI	AI Policy Overview	Gen AI Ethics/ Policy	Computer Vision Ethics/ Policy	Robotics Ethics/ Policy			
STARTUP INNOVATION: DESIGN			**PRODUCT**	**MARKET**	**FINANCE**	**STRATEGY**	**REHERSALS**	
Outcome: Conceptualize an MVP (Both Business + Data View)			**Outcome**: Startup Development & Pitch Creation			Growth, Pivoting, Scaling		
100% Live Lectures + Workshops + Project Work			100% Live Lectures + Workshops + Guest Speakers + Project Work			Career Workshop		
Vote on Project Ideas	HAI/ Design Thinking	Ideate	Product Design, UX/ UI MVP to MLP	Value Props, Narrative, GTM	Startup Financing Profitability + Business Models	Finalize Pitch Decks		
IKIGAI	Empathize + Define	Prototype						

ONLINE

WEEK 1 (JULY 13 - 19)

	SATURDAY (10 AM - 1 PM)	SUNDAY (10 AM - 1 PM)	WEDNESDAY (5-8 PM PST)	MON-FRI (6-8 PM)	Week 1 Assignments
10:00 AM - 11:30 AM (5:00 - 6:30 PM on Wednesdays)	Virtual Orientation	AI Ethics Overview	Machine Learning (Cont'd) Intro to Deep Learning	Live Office Hours with TA's and Project Consultants	- Submit Project Ideas - Vote on Project Ideas - Complete AI/ ML Assignment - Attend AI/ ML Labs and Office Hours
	Intro to the AI Landscape	Machine Learning			
11:30 AM - 1:00 PM (6:30 - 8:00 PM on Wednesdays)	AI for Good Startup Framework Avoiding common AI Startup Pitfalls	Design Thinking Overview (HAI/ HCD/ HCI)	Building AI Projects		
	Workshop: Personal Strengths	Workshop: Generate Project Ideas			

WEEK 2 (JULY 20-26)

	SATURDAY (10 AM - 1 PM)	SUNDAY (10 AM - 1 PM)	WEDNESDAY (5-8 PM PST)	MON-FRI (6-8 PM)	Week 2 Assignments
10:00 AM - 11:30 AM (5:00 - 6:30 PM on Wednesdays)	Deep Learning & Neural Networks	AI Policy Overview	Natural Language Processing	Live Office Hours with TA's and Project Consultants	- Customer/ Stakeholder Interviews - Complete AI/ ML Assignment - Attend AI/ ML Labs and Office Hours
		Computer Vision			
11:30 AM - 1:00 PM (6:30 - 8:00 PM on Wednesdays)	Announce Project Teams Design Thinking: Empathize	Design Thinking: Define	Hands on: TA Curated Lab		
	Workshop: - Problem Space Mapping - Stakeholder Mapping	Workshop: Project Teams: - Write a Problem Statement (Hypothesis)			

WEEK 3 (JULY 27 - AUGUST 2)

	SATURDAY (10 AM - 1 PM)	SUNDAY (10 AM - 1 PM)	WEDNESDAY (5-8 PM PST)	MON-FRI (6-8 PM)	Week 2 Assignments
10:00 AM - 11:30 AM (5:00 - 6:30 PM on Wednesdays)	Natural Language Processing Intro to Generative AI	Generative AI + Robotics	Review	Live Office Hours with TA's and Project Consultants	- Teams: MVP (Data Science Solution) - Complete AI/ ML Assignment - Attend AI/ ML Labs and Office Hours
11:30 AM - 1:00 PM (6:30 - 8:00 PM on Wednesdays)	Design Thinking: Ideate	Design Thinking: Prototype			
	Workshop: - Brainstorm Solutions	Workshop: Project Teams: - Conceptualize MVP	Hands on: TA Curated Lab		

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IN-PERSON AT STANFORD

WEEK 4 (AUGUST 4 - 11)

	SUNDAY (4 AUGUST)	MONDAY (5 AUGUST)	TUESDAY (6 AUGUST)	WEDNESDAY (7 AUGUST)	THURSDAY (8 AUGUST)	FRIDAY (9 AUGUST)	SATURDAY (10 AUGUST)	SUNDAY (11 AUGUST)
8:00 - 8:30 AM	BREAKFAST (Residential)							
8:30 - 9:00 AM								
9:00 - 9:30 AM		Computer Vision: Industry Applications	Generative AI: Industry Applications	Intelligent Robotics: Industry Applications	AI/ ML: Review	Communications Bootcamp	FINAL STARTUP PITCH	Check-out (Residential)
9:30 - 10:00 AM								
10:00 - 10:30 AM					AI/ ML: Finalize Data Science Projects			
10:30 - 11:00 AM		Ethics & Policy: GenAI	Ethics & Policy: Computer Vision	Ethics & Policy: Robotics				
11:00 - 11:30 AM					AI ENTREPRENEURSHIP PANEL: Founder Stories, Q&A			
11:30 - 12:00 PM		TA LAB: Applied GenAI Project Integration	TA LAB: Applied CV Project Integration	TA LAB: Applied Robotics Project Integration				
12:00 - 12:30 PM								
12:30 - 1:00 PM		LUNCH (All)						
1:00 - 2:00 PM	Stanford Room Check-In (Stanford EVGR B Housing Service Desk)						NETWORKING EVENT	
2:00 - 2:30 PM		PRODUCT DESIGN	MARKETING Value Propositions SWOT/ Competitive Analysis Go-to-market Strategy	FINANCE	STRATEGY: Impact, Growth, & Scaling	Pitch Rehearsals		
2:30 - 3:00 PM								
3:00 - 3:30 PM	AI for Good Institute In-Person Registration							
3:30 - 4:00 PM				TECH INVESTMENT PANEL			GRADUATION CEREMONY	
4:00 - 4:30 PM	OPENING CEREMONY				CAREER WORKSHOP			
4:30 - 5:00 PM		Project Work (E&I)	Project Work (E&I)	Project Work (E&I)				
5:00 - 5:30 PM								
5:30 - 6:00 PM					Startup Office Hours: FINALIZE Pitch Decks		VIDEO RECORDINGS	
6:00 - 6:30 PM	In-person Orientation Workshop:Team Dynamics	AI/ ML Office Hours	AI/ ML Office Hours					
6:30 - 7:00 PM								
7:00 - 7:30 PM	DINNER (Residential)							
7:30 - 8:00 PM								

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HIGH-LEVEL SCHEDULE

13 July – 3 August 2024
Online, Part-time

Schedule (Timings in PST):

- Saturdays and Sundays:
  - 10 AM – 1 PM: Lectures + Workshops
- Wednesdays:
  - 5 PM – 8 PM: Lectures + TA Live Labs/ Workshops
- Weekdays:
  - 6 PM – 8 PM: Live project office hours with TA's & Project Consultants (optional, scheduled individually)

*Note: This schedule is **tentative** and subject to change**

4-11 August
In-person, on campus, full-time

Schedule (Timings in PST):

- Sunday 4 August:
  - 1 PM – PM 3 PM: Check-in to Stanford EVGR (Residential)
  - 3 PM – 4 PM: Program Registration
  - 4 PM – 7 PM: Opening Ceremony + Orientation
- Monday 5 August – Friday 9 August
  - 7:30 AM – 9 AM: Breakfast (Residential)
  - 9 AM – 12:30 PM: Sessions + Workshops
  - 12:30 PM – 2 PM: Lunch (All)
  - 2 PM – 6:30 PM: Sessions + Workshops + Project Work
  - 6:30 PM – 8 PM: Dinner (Residential)
- Saturday 10 August:
  - 7:30 AM – 8:30 AM: Breakfast (Residential)
  - 8:30 AM – 1 PM: Final Pitch Day*
  - 1:30 PM – 4 PM: Networking Event*
  - 4 PM – 6 PM: Graduation Ceremony
  - 6 PM – 7 PM: Photoshoot + Video Recordings
- Sunday 11 August:
  - 7:30 AM – 9 AM: Breakfast (Residential)
  - 9 AM - 11 AM: Check-out (Residential)

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AI/ ML CURRICULUM*

**Simplified View. Not Comprehensive*
****Subject to change***

Intro to the AI Landscape

History and Context of AI, Data Science Fundamentals

Machine Learning

Supervised learning, Unsupervised learning, Reinforcement learning

Intro to Deep Learning

Neural networks, deep learning basics, architectures, backpropagation

Week 1

Deep Learning & Neural Networks

Training techniques, optimization, regularization, RNNs

Computer Vision

Image processing, feature extraction, CNNs, object detection, segmentation

Natural Language Processing

Text preprocessing, word embeddings, language models, sentiment analysis, NER

Week 2

NLP & Intro to Generative AI

Advanced NLP techniques, language models, text generation

Generative AI + Robotics

GANs, VAEs, image synthesis, robotic sensors, kinematics, AI integration

Review

Review of key concepts

Week 3

Computer Vision

Medical imaging, autonomous vehicles, facial recognition, quality inspection, security surveillance

Generative AI

Sentiment analysis, customer service chatbots, machine translation, voice assistants, document summarization

Intelligent Robotics

Content generation, synthetic data creation, personalized advertising, style transfer, creative arts and music

Week 4

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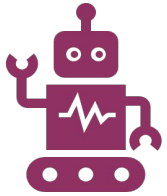
AI/ ML PROJECT FLOW

**Simplified View. Not Comprehensive*
****Subject to change***

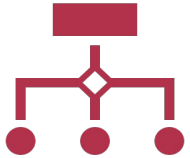


AI/ ML Fundamentals Training

Complete AI/ ML training which covers the fundamentals of data science, machine learning, and deep learning.

Engage in **live TA led workshops and curated labs** to test understanding

Explore topics like Generative AI, Computer Vision, and Intelligent Robotics.



Data Collection and Initial Model Training

Data Collection: Utilize instructor-vetted datasets relevant to the project's domain (Tech, Sustainability, Healthcare, Education).

Initial Model Development: Develop basic models leveraging machine learning techniques or **APIs** suited for quick implementation.

**Get live feedback and support from TA's during office hours or project consultants.*

Prototype Development and Testing (OPTIONAL)*

Prototype Dashboard: Construct a straightforward dashboard with simple tools to demonstrate data insights and model outputs.

Model Refinement: Optimize the model based on initial user feedback, adjusting parameters to enhance performance and accuracy.

Testing and Feedback. Conduct rapid iteration testing cycles with sample end-users to refine usability and functional effectiveness of the model.

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BUSINESS CURRICULUM*

**Simplified View. Not Comprehensive*
**Subject to change*

Online Modules	Design Thinking & Human-Centered AI
AI for Good Startup Framework	AI for Good Startups: Unique challenges and solutions.
Design Thinking & Human-Centered AI	Overview of the design thinking process and the human-centered AI design approach.
Empathize	Understand the problem, the market, and the stakeholders. Interview template.
Define	Define a clear problem statement (identify the real problem.)
Ideate	Brainstorm solutions that address the problem. Refine, narrow, and pinpoint solutions.
Prototype	Conceptualize a minimum viable product for one selected solution.
In-person Modules	**The AI Startup Canvas: Strategies for Success**
Product	Product design fundamentals. UX/ UI considerations. Shifting from MVP to MLP.
Market	User personas. Value proposition development. Marketing strategy. Go-to-market strategy.
Finance	Business models for AI for Good. Financing strategies. Balancing impact with profitability.
Strategy	Impact strategy: measurement and communication. Growth, scaling, and pivoting with success.
How to Pitch your Startup	Communications bootcamp. Pitch rehearsals and feedback.
Final Pitch*	Live pitch to VCs, investors, mentors, and advisers.
Networking and graduation	Networking event followed by graduation ceremony.

AI FOR GOOD STARTUP CURRICULUM OVERVIEW

**Simplified View. Not Comprehensive*
****Subject to change***

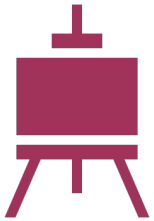
Design Thinking & HAI

Empathize: Engage in stakeholder mapping and brief interviews to understand the core needs and pain points.

Define: Formulate a clear problem statement that encapsulates user needs and expectations.

Ideate: Brainstorm potential solutions and innovative approaches to address the defined problem.

Prototype: Sketch out the MVP focusing on both AI functionality and business application, integrating Human-Centered AI considerations.



Startup Canvas and Business Fundamentals

Startup Canvas Overview: Briefly outline the startup canvas to structure the venture's foundational aspects.

Marketing and Value Proposition: Craft a compelling narrative and value prop. with basic competitive analysis.

Financial Planning: Outline a basic financial model focusing on key streams and potential profitability.

Impact and Growth Strategy: Conduct impact assessment. Conceptualize growth opportunities, and scalability based on the project's orientation.

Pitch Preparation

Communications Bootcamp: Half-day training on public speaking, storytelling, and persuasive communication to craft a compelling pitch.

Pitch Deck Development: Prepare a concise and persuasive pitch deck that encapsulates the AI solution and business model, designed for a 5-10 minute presentation to VCs.

Final pitch day – Culmination of the program.

**Delivered in an engaging format that blends lectures, case studies, workshops, live project work, guest speaker panels, applied project experience, and real VC pitch.*

WHY JOIN THE AI FOR GOOD INSTITUTE?

- **Pursue your passion for social good**. Learn how to start ventures that are impactful and financially sustainable.
- **Immerse yourself** in a week-long learning experience at Stanford, the epicenter of Silicon Valley's tech innovation.
- **Learn from the best:** Experts in data science, AI/ ML, AI ethics and policy, startup innovation, business, and entrepreneurship.
- **Learn in real-time:** Delivered 100% live — three weeks online and one week in-person at Stanford University.
- **Accelerate your Career:** At the end of the program, you will be thoroughly equipped to spearhead AI startups and innovation for social good, leveraging extensive applied project experience.

PROGRAM EXPERIENCE

- **Stanford campus immersion:** Enjoy the living and dining experience at the epicenter of innovation in Silicon Valley. Choose the residential package to live and dine on the Stanford campus for 8 days and 7 nights. (Limited spots*)
- **Experiential Learning:** Join live AI/ ML TA labs and office hours. Participate in hands-on workshops in AI, and entrepreneurship to apply concepts covered at every step.
- **Project-Based Learning:** Apply AI and ML skills to tackle real challenges through a team-based startup venture project.
- **Startup VC Pitch:** Present an AI for Good Startup idea to Silicon Valley VCs and industry mentors, receiving crucial feedback.
- **Networking Opportunities:** Access exclusive networking events with Silicon Valley professionals, mentors, and investors.

ADVANCE YOUR CAREER

- **Network** with a diverse, passionate Silicon Valley community committed to making a difference through technology.
- Earn a **Certificate of Completion** authenticating that you completed the AI for Good Institute™ at Stanford University by Impact Genius™.
- Earn a **Verified Digital Badge** (Credly) as either: AI for Good Professional, or AI Innovation Specialist, to showcase on LinkedIn, social media, and your resume.
- **Optional Transcript** showcasing courses (topics) covered and your project work.

2024 PARTICIPANT PROFILE

We are building the inaugural cohort at the AI for Good Institute 2024, and we invite **you** to apply now.

This carefully selected cohort will be:

- **Diverse** (age, experience, and specialty area) as project teams are **interdisciplinary**.
- Passionate about AI and social impact
- Ambitious and creative
- Collaborative and inclusive

Discuss: Tips to improve your application*

We strive to create an engaging, inspiring, and transformational learning experience.

Our cohort, team, and speakers will collectively elevate this experiential learning experience on the Stanford campus.

PRE-REQUISITES

- No prior coding experience is required.
- Project teams are **interdisciplinary**. **Everyone** can add value to the AI for Good Space.
- Our program is suitable for **technical** and **non-technical** professionals**.**
- Our low-code approach enables us to cover AI and Machine Learning applications for **all** learners.

PRICING AND VALUE COMPARISON

Benefits	AI for Good Institute	Program #1	Program #2	Program #3	Program #4
Duration	4 weeks*	6 days	6 days	3 weeks	3 weeks
Format	Online (3 Weeks) and In-Person (8 Days)	In-Person	In-Person	In-Person	*Online Only*
100% Live	✅	✅	✅	✅	X
Hours of Instruction *Lectures/ Labs/ Workshops/ Events*	120	40	40	120	40
Learn from Experts *Academia + Industry*	✅	✅	✅	✅	✅
AI Innovation (Theoretical)	✅	✅	✅	X	✅
Applied AI/ ML Training (Technical)	✅	X	X	X	✅
AI Ethics and Policy	✅	X	✅	X	X
Human-Centered AI	✅	✅	X	X	X
Startup Bootcamp	✅	X	X	✅	X
AI Specific Startup Bootcamp	✅	X	X	X	X
Startup Pitch to VCs	✅	X	X	✅	X
Team Projects	✅	X	X	✅	X
Professional Certificate	✅	✅	✅	✅	✅
Verified Badge (Certification)	✅	X	X	X	X
Price	$4,950 - $6,950	$15,000	$10,500	$15,000	$3,125

WHY YOU SHOULD APPLY NOW

- **Join the inaugural cohort** at the AI for Good Institute for unique opportunities:
  - Carefully selected cohort
  - Special features, project showcase, and more.
- First-round admitted applicants are eligible for up to 50% scholarship on tuition fees (Apply before 31 May 2024)*
- Visit: impactgenius.ai/apply

DON'T MISS THIS OPPORTUNITY. APPLY NOW.

Visit: impactgenius.ai/apply

Click **here** for the direct application form

Important Dates:

- **First Round Deadline:** May 31, 2024 (Admitted applicants eligible for up to **50% scholarship**. Conditional upon acceptance.)
- **Second Round Application Deadline**: June 15, 2024 (Admitted applicants eligible for partial scholarship.)
- **Third Round Application Deadline:** June 30, 2024

AI FOR GOOD INSTITUTE

AT STANFORD UNIVERSITY

13 JULY – 11 AUGUST 2024

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