



RANCHO LABS



Technology
Innovation Hub
of IIT Delhi

AI Programme & Internship

For Grade:
6th to 12th

Begin Your
AI Journey!

Your Gateway to
International Universities

ASU Ira A. Fulton Schools of
Engineering
Arizona State University

GT Georgia Institute
of Technology

S **Stanford**
University

 **Berkeley**
UNIVERSITY OF CALIFORNIA



Who are **we**?

Founded in 2019 by IIT Delhi alumni and professors, Rancho Labs is committed to sparking student interest in technology through **hands-on learning** in **AI, Coding, and Robotics**. Backed by IIT Delhi's Technology Innovation Hub, we've earned the trust of **10,000+ parents** and **innovators** worldwide with our impactful programs.



4.9/5

Average Rating by
Parents



10 +

Research Papers
Written



700 +

Innovations
Projects



50 +

Competition
Winners



About Program

The program is a **masterclass** in **discernment and architectural judgment**, designed for an era where AI has completely commoditized raw coding. It rejects basic syntax drills and prompt-engineering to focus entirely on the rare, **un-commoditizable skills** that create true distinction.

By bridging the critical gap between insight and execution, the program delivers deep, **curiosity-driven** architectural literacy. Students are trained to look beneath the surface of a chaotic tech landscape, dismantle hype, and isolate systemic flaws. This rare analytical training transitions them from **passive users into tech architects**—armed with the **sovereign cognitive arsenal** required to spot genuine gaps and engineer the precise solutions.



One Program. Two Paths.

Choose the track that matches your goal.

Particulars	AI Innovation	AI Internship
 Who it's for	Grades 6–12. Curious, exploring AI for the first time.	Grades 6–12. Focused on building a university application profile.
 Duration	20 days, full curriculum	20-day curriculum + project deployment phase
 What you build	4 structured AI projects across the curriculum	4 curriculum projects + 5 independently deployed projects
 Certificate	Certificate of Participation	Certificate of AI Internship — merit-gated
 Portfolio output	Project documentation	Live GitHub projects + LinkedIn internship listing
 Best for	Exploring, learning, levelling up	Applications to US, UK, Canada, Europe universities

Learning Outcomes



Analyze the **\$100 Million Loss** case study to understand enterprise AI risks and ethical guardrails.



Master the ecosystem of **LLMs** (ChatGPT, Claude, Gemini, DeepSeek, and Perplexity).



Build and manage professional-grade code repositories using **Git**.



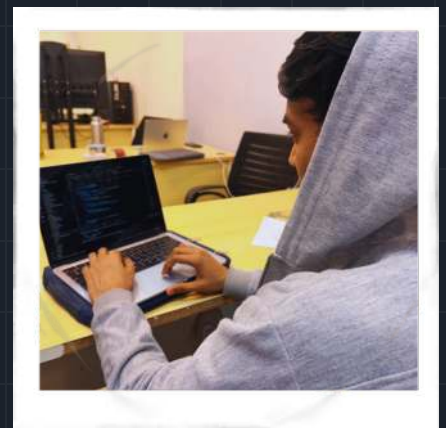
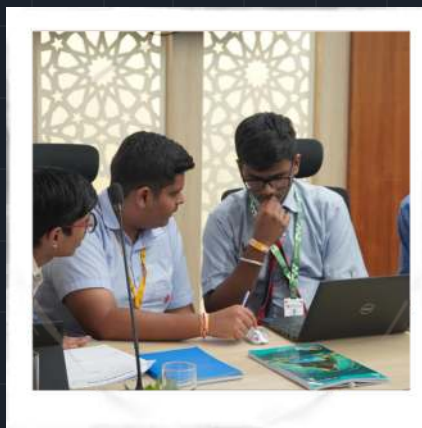
Develop advanced **Web Scrapers** that use AI to extract and clean data.



Architect **Agentic AI** systems that perform tasks autonomously using Python.



Get internship certification and recommendation from Rancho Labs (Applicable only for AI internship students).



Schedule

(2 hours each)

Month 1: AI Literacy , Prompt Engineering & LLM Mastery

Session 1

Introduction to AI

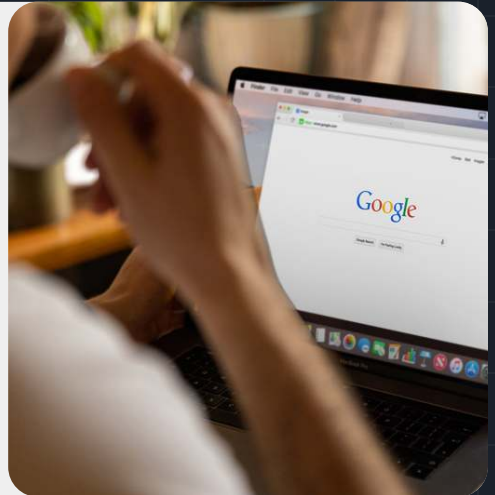
- What is Artificial Intelligence
- Brief history of AI
- AI in modern world
- Media generation tools
- Image generation using nanobanana
- Audio generation using lyria
- Text 2 speech using eleven labs



Session 2

NLP, LLM, Prompt Engineering

- What are LLMs
- What is NLP, and terms used in NLP
- How do computers make sense of our language
- What can improve or worsen LLM response
- How to rate the quality of a prompt
- One-shot vs Few-shot prompting
- Chain of thoughts & Iterative prompting
- Making Reusable and Scalable Prompt Templates



Session 3

Notebook LM

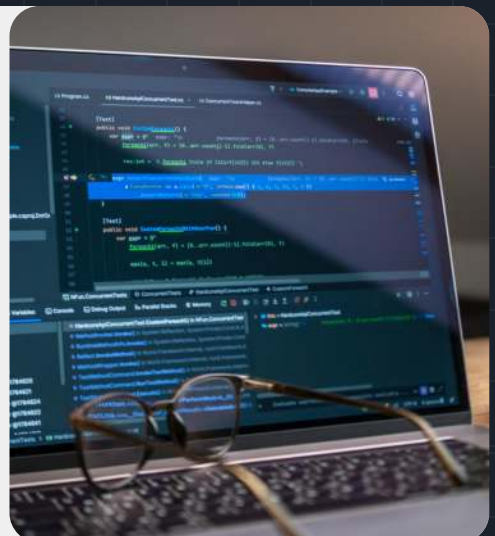
- Notebook LM for research & documentation
- Adding sources in your notebook
- Chatting with your custom Language Model
- Generating various outputs in notebook LM studio



Session 4

Google Opal

- Creating apps by writing prompts
- Connecting opal apps with documents on drive
- Deploying created apps on cloud and share with a link



Schedule

(2 hours each)

Month 2: Python Foundations & Core Development

Session 5

Setting-up Programming Environment

- Installing vscode
- Setting up vscode
- Brief tour of vscode interface
- Installing Python
- Setting up Python environment
- Basic Input Output programs in Python



Session 6

Fundamentals of Python 1

- Understanding of Flow of Control
- Understanding conditions & making decisions in programming
- Selecting what code to run based on conditions
- Repeating certain code block based on conditions



Session 7

Fundamentals of Python 2

- Understanding of python Data Structures and their operations
- List structure to store ordered data, and its operations
- Dictionary structure to store labelled data, and its operations
- Nesting of data structures to store complex data in programming



Session 8

Fundamentals of Python 3

- Understanding of Functions & Modules in python
- Creating functions - reusable programming code blocks
- Creating modules
- Some inbuilt python functions & modules



Schedule

(2 hours each)

Month 3: Version Control, Data Handling & Web Apps

Session 9

Version Control with Git & Github

- Explaining the need of version control
- Installing Git
- Explaining Git commands & Git Flowchart
- Making a Github account
- Hosting a local Git repository on Github



Session 10

Data Handling

- Explaining the need of files
- Saving data and Logging
- How to read a text file using python script
- How to write a text file using python script
- CSV & JSON file format
- Reading csv & json data from data files
- Working with csv & json data using python



Session 11

Webscraping

- Intro to webscraping
- Viewing webpage source code
- Understanding HTML tags and layout
- Introduction to BeautifulSoup Library
- Filtering different by HTML tags
- Functions to fetch and convert webpage data



Session 12

Application Programming Interfaces

- Introduction to APIs
- Explaining the http requests & responses
- Fetching data using various APIs
- Destructuring JSON data into Python structures
- HW Project: Ask students to create an app using an API as a service



Schedule

(2 hours each)

Month 4: AI Application Development & Deployments

Session 13

Streamlit interfaces

- Introduction to Streamlit Library
- Streamlit text components
- Streamlit input components
- Streamlit media components
- Streamlit Session States



Session 14

Streamlit app deployment

- Understanding the concept of env file
- Understanding the concept of gitignore file
- Understanding the concept of requirements file
- Understanding the concept of readme file
- Hosting a Streamlit App on Cloud



Session 15

Google Gemini API

- Understanding Chatbot Workflow
- Understanding API keys
- Using API key to interact with AI models
- Creating a Chatbot interface using Streamlit



Session 16

LangChain & AI Agents

- Introduction to LangChain
- Installing and Importing
- Prompt Templates
- Simple Sequential Chains & Sequential Chain
- Streamlit UI for the App



Schedule

(2 hours each)

Month 5: AI Automation, Vibe Coding & Deployment

Session 17

N8N: Set-up

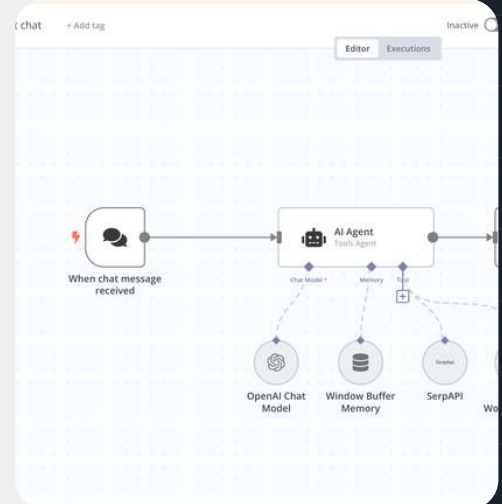
- Intro to n8n
- Installing & setting up N8N
- Setting up google credentials
- Explaining different nodes
- Automating email generation from filled forms



Session 18

N8N: Project

- Revision of n8n concepts
- Understanding HTTP requests
- Setting up the project requirements
- Configuring the n8n workflow
- Testing and Debugging
- Revision and Doubt Session



Session 19

Vibe coding

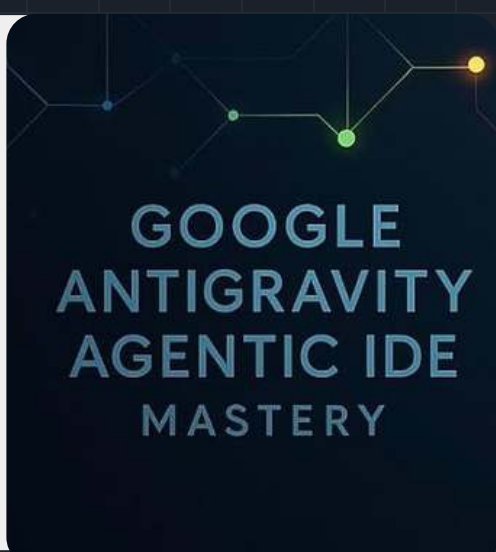
- Introduction to Claude ai
- Setting up claude for app development
- Prompting claude to generate apps with no code
- Giving students time to try out and helping them improve the result
- Debugging & Fine tuning
- Deploying web app on github pages
- Revision and Doubt Session



Session 20

Google Antigravity IDE

- Installing Antigravity
- Understanding Antigravity & AI agents
- Generative AI vs Agentic AI
- Vibe coding an entire project
- Revision and Doubt Session



Certificate of Completion



Certification by **Rancho Labs** &
**Technology Innovation Hub of
IIT Delhi**



Fee Structure



Online Fee: (Group class)
~~Rs.35000/-~~ **Rs.30000/-**



Online Fee: (One-on-one)
~~Rs.45000/-~~ **Rs.40000/-**



Benefits Beyond Course

'Get Access to Rancholabs' invitation-only **membership**, which unveils the benefits stated below:

Access to **50+**
Rancholabs Project
Library



Rancholabs
Community Access

Access to Invitation
Only **events** and
workshops

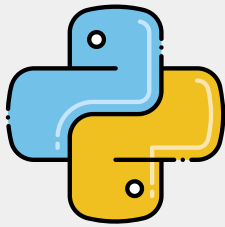


5%+ additional
Discount on
Rancholabs products
and Services

Rancholabs
Scholarship Test and
Magazine

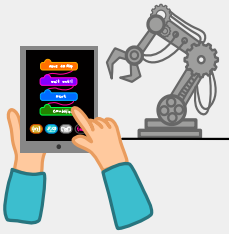


Discover more Programs



CORE PYTHON & AI PROGRAM

For Grade 6-12



YOUNG INNOVATORS PROGRAM

For Grade 6-12



YOUNG EXPLORERS PROGRAM

For Grade 2-5



GAME DEVELOPMENT PROGRAM

For Grade 6- 12

NOTE:

Students must **Bring a Laptop** to every class. This is **mandatory**.

Proof of Excellence



From theory to real world execution

My time at Rancho Labs was a defining chapter in my path to the Georgia Institute of Technology. The environment here encourages you to push beyond standard learning and engage in high-level technical execution. By bridging the gap between complex theory and real-world application, the mentorship I received was essential in building a profile that stands out on a global stage. For any student aiming for top-tier international universities, the hands-on rigor at Rancho Labs is an invaluable launchpad.



Aryan Verma

Student at
**Georgia Institute of
Technology**



Proof of Excellence



Real systems built a top tier edge.

My experience at Rancho Labs was pivotal on my journey to UC Berkeley. The mentors didn't just help me build my Smart Home Automation System; they ensured I mastered the underlying engineering concepts. This combination of hands-on innovation and technical depth gave my application the competitive edge needed for a top-tier global university. Rancho Labs is the place where student projects transform into world-class opportunities.



Kartik Agarwal

Student at
University of California,
Berkeley



Berkeley
UNIVERSITY OF CALIFORNIA

Proof of Excellence



From robotics to global engineering.

Rancho Labs was the catalyst for my journey into global engineering. The deep dive into robotics and automation, including our Top 500 finish in the Youth Ideathon'24, provided the practical foundation I needed to excel. That hands-on experience was instrumental in taking me from real-world tech applications in India to pursuing my B.S. in Robotics and Autonomous Systems at Ira A. Fulton Schools of Engineering at Arizona State University.



Ishan Srivastav
Student at
Arizona State University

ASU Ira A. Fulton Schools of
Engineering
Arizona State University

Proof of Excellence



Curiosity to patented innovation

Rancho Labs transformed my curiosity into a patented innovation. The mentorship didn't just teach me how to build; it taught me how to solve real-world problems at a level that demanded legal recognition. Securing the patent was the ultimate differentiator for my profile. It shifted the narrative of my international university applications, proving that I could execute research at a professional standard. This credential was the key that opened doors to top-tier global institutions, turning my technical passion into a bridge to the world's best colleges.



Rashil Gupta

RanchoLabs Student



Stanford
University

Proof of Excellence



Rancho Labs has been an incredible learning partner for my son, Bhavik, over the past two years. Their structured approach to teaching coding and AI has not only strengthened his technical skills but also helped him develop logical thinking and a problem-solving mindset. The emphasis on design engineering and real-world applications has given him a strong foundation for the future. We truly appreciate their dedication to nurturing young minds and making learning both engaging and impactful. Thank you, Rancho Labs, for inspiring and empowering the next generation of innovators!



Puneet Arora &
Payal Madan Arora

Parents of **Bhavik Arora**

CEO @Advolt Pvt Ltd
CEO@Gofitness

Contact Us



+91 92051 60865, +91 8130548499



info@rancholabs.com



@rancho.labs



RanchoLabs



Corporate Office: Rancho Labs, Vishwakarma Bhawan, IIT Delhi, Hauz Khas, New Delhi - 110016



O-108 1st floor, shopping mall, Arjun Marg, Block E, DLF Phase 1, Sector 26A, Gurugram, Haryana 122002



Spectrum metro mall, Tower A, 5Th Floor, Unit No. 504 & 506, Phase-1, Sector 75, Noida, Uttar Pradesh 201301

Tech Journey Begins Here

