1M1B AppliedAI

Project Report

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Executive Summary

This report covers a two-day AppliedAI demo session conducted at the Young Scholar's Academy, Bangalore, on June 16th and 17th, 2026. The session was designed as a proof-of-concept for the AppliedAI Foundational and Intermediate curriculum, implementing a select few lessons from the course over two days for approximately 55 students from Grade 8 and Grade 9.

Over approximately 8 hours across two days, students worked in groups to identify real-life problems in their communities and build image-classification models using Google Teachable Machine to address them - most with little to no prior experience using AI as a tool. Overall, the demo sessions were a success, with over 82% of students rating enjoyment 4 or 5 out of 5.

Background and Motivation

Why This Project

Growing up in the IGCSE and IB system, hands-on learning was just part of how things worked - experiments, research projects, building things. I didn't think of it as anything special. It was only later that I realised how much it made possible for me.

In 2025, I did a 50-hour sports science internship at the Centre of Excellence in Sports Science and Analytics (CESSA), an initiative by IIT-Madras, where I worked on real-life problems such as gait analysis and stride segmentation. Around the same time, I also independently built and tested an IMU-based smart compression knee sleeve for ACL rehabilitation patients, with the goal to implement more objective and data-based rehabilitation. Neither of these projects would have happened without years of applied learning under my belt, which I am truly grateful for.

The problem is that most students never get the opportunity to undertake applied learning. In underfunded schools, especially in rural Northeast India, learning is still mostly based on memorisation and exam prep. While that is definitely a necessary aspect, students have no room for experimentation or to live what they learn. By the time the gap in skills becomes evident, it is already difficult to bridge.

This project is an attempt to change that.

The Problem Being Addressed

The issue isn't that content doesn't exist: content and courses are available all over the internet, on platforms such as YouTube. The problem is structure and awareness.

- Only **18.5%** of rural schools in India have internet access, compared to **47.3%** of urban schools (UDISE+ 2021–22). The NEP 2020 mandates are unlikely to reach rural areas at the same speed as urban areas, meaning the gap is widening.
- **280 million** Indian workers face the problem of AI taking their jobs by 2030 - the majority of them rural, low-skilled, and in the informal sector (McKinsey, 2023).

- **63%** of India's workforce will need upskilling or reskilling by 2030 (WEF Future of Jobs, 2025).
- Employer demand for AI and big data skills is projected to increase by **87%** by 2030 (WEF, 2025).
- CBSE is making AI and Computational Thinking mandatory from Class 3 starting 2026–27 – but schools in these areas often face issues in implementing these programs, especially infrastructure-related.

The students who need AI literacy the most are currently the furthest from it. This curriculum is built to close that gap in schools and lab environments where resources are limited but students are still eager to learn.

What Has Been Built

The Applied AI Curriculum

The core of this project is a 3-tiered AppliedAI curriculum, structured based on grade level and designed to be delivered in 1M1B innovation labs.

Tier	Grades	Duration	Core Focus
Foundational	6–8	21 weeks	Block coding, AI basics, data literacy, Kaggle, Micro:bit
Intermediate	9–10	22 weeks	Python, UI/UX, sensors, vibecoding, design thinking
Advanced	11–12	18 weeks	APIs, data analysis, ML, hardware integration, deployment and ethics

- Most primary tools run in-browser with no installation required (Scratch, Google Teachable Machine, Replit, Kaggle, Figma, MakeCode). However, Arduino IDE, which may be a prominent part of projects of Intermediate and Advanced students, requires installation and significant amounts of hardware.
- LLM prompts are embedded at every point where a teacher or student might get stuck, so that students get more comfortable with using AI in general, especially with prompting.
- Examples, datasets, and case studies are grounded in Indian and Northeast Indian contexts - crop production data from Assam, AI tools like Bhashini, applications in Indian healthcare and agriculture. This will help students relate to what they see in the course.

Supporting Materials

In addition to the three main course documents, the following supporting materials are also included:

- Teacher Handbooks (Foundational, Intermediate, Advanced) – tips and tricks for teachers to help them plan sessions and deal with hiccups, along with LLM prompts to give them resources
- Project Handbooks (Intermediate and Advanced) - five projects each, across five domains: Education, Health and Wellness, Agriculture and Water, Local Business, and Community and Tourism – handholding students through the entire project

Pilot Session - Young Scholar's Academy, Bangalore

Session Overview

School	Young Scholar's Academy, Bangalore
Dates	June 16–17, 2026 (2 days, 2 sessions per day, 2 hours per session)
Grades	8–9
Student Count	55 students
Primary Tool	Google Teachable Machine (image classification), Kaggle
Feedback Collected	11 post-session responses
Conducted by	1M1B Applied AI

Session Design

The session was structured across four two-hour slots over two days. All the material from the session was taken from Foundational and Intermediate course content that was compressed to make it demo-friendly. Certain modules were cherry-picked from the courses in order to make the demo as fun and engaging as possible for students. Hardware-dependent activities such as Arduinos and sensor kits were not feasible as there were logistics and connectivity issues. Google Teachable machine was selected as the primary tool for learning because it:

- runs entirely in-browser with no installation (which would have been required for any robotics demos)
- produces immediate outputs that the student can manipulate in real-time
- naturally teaches students the fundamental concept of data and data quality, which is central to AI
- enables students to have the perspective that AI can be used to solve real problems and create social impact, not just for trivial everyday tasks

Initially, students were introduced to basic concepts of AI, as most of them were unfamiliar with how it worked. Then, they progressed to learning about data using Kaggle to analyse a variety of different datasets. After having extended discussions on the importance of data quality, a short demonstration was done using the classic cat-and-dog example on Google Teachable

Machine. Subsequently, students progressed to making their own models on Google Teachable Machine, applying image recognition to categories like sports jerseys, animals and plants, food quality, cartoon characters etc. The students were then introduced to the concept of design thinking, and applied some techniques to come up with real problems that could be solved in their daily life.

Student Outcomes

82% Rated enjoyment 4 or 5 out of 5	**100%** Correctly identified model bias	**9/11** Would definitely continue learning AI
8/11 Feel confident on AI basics post-session	**6/11** Had little-to-no prior AI knowledge	**4** Sessions across 2 days (8 hours total)

What Worked

- Teachable Machine required no installation and no hardware, removing the risk of unplanned hardware failures
- Students could see model failure in real time, and also see it improve as the quality and quantity of data improved. This helped them understand the relationship between data and AI in real time
- Open problem choice increased engagement: students chose problems they cared about and were quite excited and engaged with those problems.
- The two-day format was sufficient for a conceptual foundation and a live demo, even with zero prior AI exposure for roughly half the cohort.
- Some students even went out of their way to confuse the model and see how it would react, showing a deep understanding of concepts.

What to Address in Follow-Up Sessions

- Several students requested ChatGPT and LLM usage be included, which could be a reasonable next step or a progression given more time
- Surprisingly, some students had issues with downloading images and were unaware of technical concepts like what file types could be used with Google Teachable Machine. Most of them were unaware of the idea of file types. Such basic knowledge could be added to the course, especially in the Foundational curriculum.
- Some students requested that a robotics and hardware integration also take place; however, this cannot be done without access to a facility like an ATL lab.

Selected Student Feedback

> *"The workshop was so good and it benefited us and both the society and the future."*
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> *"Good teaching and teachers."*

> *"Very informative and futuristic, will be helpful."*
> *"Loved the sessions. Finally, a session which has helped and will be applicable in life."*
> *"It was a good workshop. We had a lot of fun learning."*
> *"I want the school to arrange this type of program more often."*

Forward Vision – 1M1B Innovation Labs, Northeast India

The Lab Model

The long-term goal of this project is to integrate the course content with the 1M1B innovation labs, a physical space that schools across the region can send students to for future technologies education. Lab facilitators will draw from the course material, implementing specific modules and activities, and adapting them into session formats that are in line with time and viability constraints. The lab will contain three tiers of equipment:

- Digital Foundation: Laptops, PCs, stable internet, browser-based compilers, access to AI tools, smartboard for instruction
- Electronics and Sensors: Breadboards, LEDs, microcontrollers, sensors, soldering station + multimeters, Li-ion battery packs
- Fabrication Station: 3D printers, filament, hand tools and machine tools, craft tools

Alignment with UN SDGs

- SDG 4 (Quality Education): The programme directly addresses the gap in quality, applied education for students in underserved regions
- SDG 10 (Reduced Inequalities): Making AI and future technologies genuinely accessible - not just as theory, but as something students can build with and apply - to those who would never encounter it otherwise.
- SDG 8 (Decent Work and Economic Growth): The curriculum is explicitly oriented toward job-relevant skills - coding, AI literacy, design thinking, and problem-solving.

Next Steps

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