# CATERPILLAR AND PARTICIPANT EVALUATION PROJECT

This Agreement, dated as of this 30<sup>th</sup> day of June, 2023 (the "Effective Date"), is by and between Caterpillar India Engineering Solutions Private Limited, a company established and existing under laws of India and having Registered office at, 7th Floor, International Technology Park CSIR Road, Taramani Chennai, TN, 600113 "Sponsor"), and those Participants from selected colleges in India identified below (as "Participant").

#### WITNESSETH:

WHEREAS, Sponsor and Participants wish to collaborate on Participant Evaluation Project (Exhibit 1), hereinafter referred as "Project" whereby Participants are provided with an opportunity to work on projects related to Sponsor's operations; and

WHEREAS, the Participants wish to participate in the Project according to the terms set forth in this Agreement

NOW THEREFORE, in consideration the Participant hereby agrees as follows:

#### 1. **DEFINITIONS**

- 1.1. "Background Intellectual Property" means, with respect to either Party, any and all Intellectual Property that is: (i) owned, acquired, or developed by such Party prior to the start of the Term of this Agreement, (ii) first conceived, reduced to practice, created, or developed by such Party after the termination or expiration of this Agreement, (iii) first conceived, reduced to practice, created, or developed by such Party during the Term of this Agreement, but that is not Project Intellectual Property, or (iv) any modification, enhancement, or improvement of such Party's Background Intellectual Property that is unrelated to any development work.
- 1.2. "Deliverables" means those items that are created as part of the objectives of a Project and which are identified in Exhibit 1.
- 1.3. "Intellectual Property" means patents, copyrights, and all other forms of statutory or common-law intellectual property protection of conceptions, creations, ideas, innovations, discoveries, inventions, compositions, methods, trade secrets, know-how, information, data, works of authorship, and results, in each case as arises in every jurisdiction in the world whether or not patentable, copyrightable, or susceptible to any other form of statutory or common law legal protection.
- 1.4. "Party" means Sponsor or Participant. "Parties" means Sponsor and Participant.
- 1.5. "Project" means the work to be performed under this Agreement that is identified in Exhibit 1 to this Agreement.
- 1.6. "Project Intellectual Property" means Intellectual Property that is not Background Intellectual Property and that is first conceived, reduced to practice, or created, or developed, either singly or jointly by the Parties, or by persons retained by a Party or all Parties, under the Project.

### 2. THE PROJECT

- 2.1. The specifics related to the Project will be set forth in Exhibit 1 to this Agreement which will commence on June 30, 2023 and terminate on July 1, 2023 (the "Term").
- 2.2. A designated Caterpillar person shall each be nominated as the Project Advisor and shall be identified in Exhibit 1. The Participants may report freely any information about the Project(s), its progress, and technical developments to the Project Advisors, all of whom shall be bound by the conditions of this Agreement.
- 2.3. The Participant retains the right to complete a Project final report ("Report") and retain a copy for the purpose of demonstrating to a prospective employer or academic institution that they have practical engineering experience. The Report shall be marked "Confidential" and will be subject to the obligations set forth in Sections 3 and 5 of this Agreement prior to sharing with any third parties, or be devoid of any Confidential Information.
- 2.4. As between the Parties, Sponsor shall own all right, title and interest in any prototypes, reports, software, demonstration models, or any other deliverable created under a Project.

### 3. CONFIDENTIAL INFORMATION

- 3.1. For purposes of this Agreement the term "Confidential Information" shall mean any and all information, know-how, data, technical and non-technical materials, designs, concepts, processes, product samples and specifications, financial or business information furnished by Sponsor to Participant and which is (i) disclosed in writing or other tangible form and marked to indicate that it is confidential at the time of disclosure, or (ii) disclosed orally or in another intangible form and is identified as confidential at the time of disclosure. Notwithstanding the foregoing, the term "Confidential Information" does not include information that: (i) was already in the possession of the Participant prior to the receipt of the information from the Sponsor without restriction on its use or disclosure; (ii) is or becomes available to the general public through no act or fault of the Participant; (iii) is rightfully disclosed to the Participant by a third party without restriction on its use or disclosure; or (iv) was independently developed by the Participant without any use of or reference to the Sponsor's Confidential Information.
- 3.2. Participant may disclose the Confidential Information to prosecute or defend litigation or to comply with applicable governmental regulations; *provided*, *however*, that if Participant is required to make any such disclosure of Confidential Information it will to the extent practicable give reasonable advance notice to Sponsor of such disclosure requirement and will use its best efforts to secure confidential treatment of such Confidential Information required to be disclosed.
- 3.3. Participant agree to maintain in confidence the Confidential Information with the same degree of care it holds its own confidential and proprietary information. Participant will not disclose the Confidential Information to any third party nor will Participant use the Confidential Information for personal gain or any other purpose except as permitted by this Agreement.
- 3.4. The obligations of confidentiality and non-use of Confidential Information for the Project shall terminate five (5) years after date of completion of this Agreement, unless the Parties enter into a definitive contract modifying or superseding this Agreement, in which case the rights and obligations of the Parties shall be governed by that contract.

#### 4. INTELLECTUAL PROPERTY RIGHTS

- 4.1. As between the Parties, Sponsor will own all Sponsor Background Intellectual Property, and the Participant(s) shall own their respective Background Intellectual Property.
- 4.2. In consideration of the educational benefit the Participant(s) will receive through participation in the Project(s), Participant hereby irrevocably transfers and assigns to the Sponsor: (a) all Project Intellectual Property; (b) all right and title in any Deliverables; and (b) any and all moral rights that Participant may have in or with respect to any Project Intellectual Property that is assigned or assignable to the Sponsor under this Agreement, and hereby forever waives and agrees never to assert any and all moral rights Participant may have in or with respect to any Project Intellectual Property that is assigned or assignable to the Sponsor under this Agreement. To the extent any of the Program Intellectual Property assigned to Sponsor herein qualifies as a "work-made-for-hire", the Parties hereby agree that the creation of such works are commissioned at Sponsor's request and direction and shall be considered a "work-made-for-hire" under the copyright laws of the United States.
- 4.3. Participant agrees to grant, and hereby grants, to Sponsor a non-exclusive, world-wide, sub-licensable, royalty-free and irrevocable license to Participant's Background Intellectual Property necessary for making, using, offering to sell, selling, importing, supporting, reproducing, distributing, making derivative works of, publicly performing, publicly displaying and maintaining the Deliverables as well as any processes and improvements related thereto.
- 4.4. Participant agrees to promptly disclose in confidence to the Sponsor Project Intellectual Property that Participant creates, either along or jointly with others, during the Project, and Participant will promptly execute and deliver, or cause to be executed and delivered, all applications, assignments, or other instruments, and will perform, or cause to be performed, such acts as Sponsor may reasonably deem necessary or advisable to enable Sponsor to exercise the rights expressed in this Section 4.

#### 5. PUBLICATION RIGHTS

5.1. Participant shall be permitted to publish the results of any research performed under this Agreement, provided that (i) such publications are subject to the Confidential Information clause of this Agreement and (ii) Sponsor shall have been furnished copies of any proposed publication or presentation at least thirty (30) days in advance of the submission of such proposed publication. Sponsor shall have thirty (30) days after receipt of said copies to object to such proposed presentation or proposed publication, either because there is patentable subject matter that needs protection and/or there is proprietary or confidential information of Sponsor contained in the proposed publication. In the event that Sponsor makes such objection because of confidential or proprietary information, Participant will delay publication for up to an additional thirty (30) days to allow time for Sponsor to file a provisional patent application or take other steps to protect any potential trade secret information contained in the publication.

# 6. MISCELLANEOUS

6.1. The Term of this Agreement will begin on the Effective Date and will continue until the end of the Term.

- 6.2. IN NO EVENT SHALL THE SPONSOR BE LIABLE TO THE PARTICIPANT FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE OR RELIANCE DAMAGES ARISING OUT OF THIS AGREEMENT OR SPONSOR'S USE OF THE DELIVERABLES, ON ANY THEORY OF LIABILITY EVEN IF SUCH PARTY IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
- 6.3. Participant represents and warrants that in performing the Project it will not disclose or use any confidential information of any third party or produce any Deliverables the use, manufacture, or sale of which infringes or otherwise violates the rights (including, but not limited to, intellectual property rights) of any Person.
- 6.4. This Agreement shall be governed by the laws of India. The Parties acknowledge and agree that the courts of Chennai state shall have jurisdiction and venue to adjudicate any and all disputes arising out of or in connection with the Agreement..
- 6.5. The Exhibits identified in this Agreement are incorporated in this Agreement by reference and made a part of this Agreement.
- 6.6. This Agreement sets forth the entire agreement and understanding among the Parties as to the subject matter hereof, and none of the terms of this Agreement shall be amended or modified except in writing signed by Sponsor.
- 6.7. The Participant will not use the name of Sponsor, or its employees, in any publicity without prior approval of the Sponsor.
- 6.8. Participant understands that this Agreement does not constitute a contract of employment or obligate the Sponsor to employ Participant.

IN WITNESS WHEREOF, the Participant has executed this Agreement to be effective as of the Effective Date set forth above.

PARTICIPANT
By:
Name:
Date:
Email / Phone:
College Name, Branch, Year:
A parent or legal guardian is required for Participants younger than 18 years of age:
Parent/Legal Guardian:
Parent / Legal Guardian Signature:
Date:

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# EXHIBIT-1 Participant Evaluation Project

# About Caterpillar®

Since 1925, Caterpillar Inc. has been helping our customers build a better world – making sustainable progress possible and driving positive change on every continent. Today, Cat® technologies make it possible for you to automate a single mining process, remotely control a single machine, automate multiple types of equipment across your fleet, or implement a completely autonomous fleet of haul trucks that operate around the clock with no human intervention.

Cat Digital is the digital and technology arm of Caterpillar Inc., leveraging the latest technologies to build industry leading digital solutions for our customers and dealers. With over one million connected assets worldwide, our teams use data, technology, advanced analytics, telematics, and AI capabilities to help our customers build a better world.

Big machines require big thinking. Are you looking for your next big challenge?

# Participant Evaluation Project

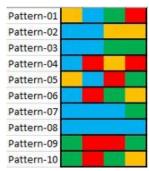
# **Color Pattern Sequence Frame Decoder**

Develop a solution to analyze the incoming video stream of color patterns and identify each color and their duration and correct sequence. Based on available list of known sequence patterns, identify start and end of full or partial pattern in the stream.

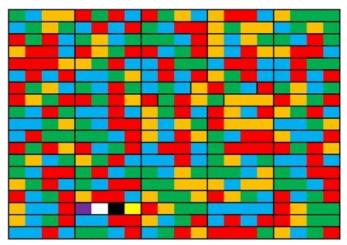
# Deliverables:

- Leverage existing Python libraries to capture the live video stream from PC camera.
- Stage1:
- o Identify the major color on screen and decode based on the RGB values.
- o Measure the duration of each color slot and create sequence based on the shortest color-slot duration.
- $\circ~$  e.g. Stream: RED-300ms, GREEN 50ms, YELLOW 200ms => Decoded Sequence will be RRRRRGYYYY
- Compare the continuous stream/sequence with available list of patterns and identify start and end of full/partial/invalid pattern.

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**Known Pattern Sequence** 



**Test Color Sequence**