

# MEMORANDUM OF UNDERSTANDING

BETWEEN

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

AND

**Director of Higher Education and Director of Technical Education,  
Department of Higher and Technical Education, Government of  
Maharashtra**

This Agreement is made and entered into on this 5th day of January 2023 between the Indian Institute of Technology, Bombay (hereinafter called IITB) situated at Powai, Mumbai 400 076, an Institute of national importance established by a special act of Parliament of Republic of India and **Director of Higher Education and Director of Technical Education, Government of Maharashtra** having their registered offices at Central Building, Pune and at 3, Mahapalika Marg, Post Box No.1967, Mumbai respectively. (hereinafter called "DHE and DTE" which expression shall include its successors and permitted assignees).

## **Aim and Details**

The Parties agree to collaborate to translate all conventional as well as professional course books in the Marathi language as outlined in National Education Policy 2020. DHE and DTE recognize IITB's proficiency in developing a state-of-the-art translation ecosystem in the Marathi language.

## **The MoU aims to:**

- 1) Translate conventional as well as professional courses books using Machine Learning (ML) enabled on UDAAN (<https://udaanproject.org/>) platform through
  - (i) initial translation of the books based on dictionaries and other capabilities at UDAAN and
  - (ii) further post-editing of such translated books using the UDAAN post-editing workbench.

2) Create a cooperative platform for institutes under DTE and DHE to make use of the UDAAN platform and tools for the translation of books related to various faculties into Marathi for use by the students and teachers of institutes in Maharashtra by way of training/workshops and other appropriate means of hand-holding.

## **2. Scope & Services of MoU**

### **PROPOSED MODES OF COLLABORATION**

IITB on one part and DHE and DTE on the other part propose to collaborate through

1. Knowledge Management
  - a. Development of conventional as well as professional courses books content in Marathi languages
  - b. Development of lexical resources necessary to develop technologies for translation
  - c. Working with users to develop user-centric tools to ease the work.
2. Translation Ecosystem Development
  - a. IITB will serve as a technology development partner that aids DHE and DTE to produce a publishable quality translation in the Marathi language.
  - b. Building an ecosystem where the researchers, academia, and users can work in close collaboration on research problems, technology challenges and product innovation
3. Any other appropriate mode of interaction agreed upon between IITB and DHE and DTE.

Each of the above modes of interaction will be initiated by entering into separate agreement(s) between IITB and DHE/DTE or institutes nominated by DTE/DHE

This collaboration will benefit both parties in the following manner.

### **Role and Responsibilities of the IITB**

1. IITB will pro-bono train the team identified by DTE and DHE on the use of the UDAAN tool, its deployment, operation etc. The number of trainees and other modalities like duration, batch size, etc to be mutually agreed upon by

parties signing this MoU through their designated coordinators/ Single Point of Contact.

2. IITB will help DTE and DHE create their own in-house Trainers team.
3. IITB will facilitate the translation of conventional as well as professional courses books and related resources, identified by DHE and DTE, into the Marathi language through (i) the UDAAN team's backend system and (ii) the UDAAN tool (both offline and online).
4. IITB will provide detailed guidelines, training and support for the deployment of the UDAAN post-editing tool to DHE and DTE translators.
5. IITB will help facilitate the identification and recommendation of books and research publications of international repute through well-known publishers for which DHE and DTE could officially initiate talks on translation into Indian languages.
6. IITB UDAAN team will try to handhold the DTE and DHE team on the Legal Framework about Books and copyrights through introductory guidelines or best practices learnt through prior experience of the IITB UDAAN team through its engagements such as AICTE.
7. IITB will do handholding of in-house teams under DTE and DHE on UDAAN tools so as to enable DTE and DHE to create a team of translators under DTE and DHE, in the long run.
8. IITB will participate through its representative in the Review meetings conducted by DTE and DHE.
9. IITB shall designate suitable resources for participation in the Dispute Redress Committee, which may be required to be formed, should the circumstances require so.

### **Role and Responsibilities of the DHE and DTE**

1. DTE and DHE shall designate an officer each as a Single Point of Contact for coordination and liaison with the UDAAN team for the execution of this project.
2. DHE and DTE shall identify and create a pool of manpower for translation work with help of the universities and institutes including autonomous technical institutes.
3. DHE and DTE shall identify books, reference material, and documents for translation into Marathi.
4. DHE and DTE GoM will acknowledge the support of the IITB and UDAAN team in the translated books, reference material, and documents.

5. DHE and DTE will provide server infrastructure for hosting and deployment of translation models and user interfaces.
6. DHE and DTE will acknowledge the UDAAN end-to-end translation ecosystem by featuring UDAAN and IITB as key Machine Learning translation-ecosystem partners on their websites. DHE and DTE will allow the listing of DHE and DTE as partners on the UDAAN website.
7. In the longer run, DHE and DTE would create an in-house training team who could help with hand-holding of the UDAAN tools by the DHE and DTE translators. This team can work in close coordination with the UDAAN team at IITB.
8. DHE and DTE shall either themselves participate or designate suitable officers for participation in the Dispute Redress Committee, which may be required to be formed, should the circumstances require so.

Both parties stand to be benefited from the development of resources during the collaboration.

### 3. FORMS OF RESEARCH AND DEVELOPMENT PROGRAMS

The form of any of the said Research and Development Programs (hereinafter referred to as "Research Program") will be subject to a separate Research Agreement entered into by the Parties but may also include the following:

- a. **In their own existing facilities:** The performance of research individually by each Party or concurrently by both Parties in mixed groups at their own facilities with regular exchanges of results.
- b. **In a separate research and development facility:** The performance of research by the technical personnel of both Parties working together in the facilities of one Party or in mixed groups at the facilities supported/sponsored by either Party.
- c. **Third parties:** The performance of research by the Parties together with one or more third parties.

### 4. TECHNICAL AREAS OF COLLABORATION

The principal technical areas of collaboration between IITB and DHE and DTE will be decided by both parties on a mutual need basis.

## 5. AGREEMENTS FOR RESEARCH COLLABORATION

Each research collaboration undertaken by the parties hereunder shall be initiated by the signing of a separate research agreement between the parties, which will describe in detail:

- a. the nature, scope and schedule of the research collaboration.
- b. the form of research collaboration.
- c. the estimated cost of the research collaboration together with the amount of funding, if any, to be received from third parties.
- d. the treatment of intellectual property and data rights, including patents, industrial design registration, copyrights and all other proprietary information (including innovations not patented, designs not registered etc.) which result from the research collaboration or which belong to a party and are used in research collaboration.
- e. other provisions may be mutually agreed upon, including provisions covering the consequences of default or termination by a participant, term, arbitration of disputes and applicable law.

## 6. CONFIDENTIALITY

- a. During and for a period of three years from the date of disclosure, each party agrees to consider as confidential all information disclosed by the other party in written or tangible form or, if orally disclosed, confirmed in writing within thirty days of disclosure and identified as confidential by the disclosing party.
- b. The obligations above shall not extend to any confidential information for which the receiving party can prove that this information:
  - is in the public domain at the time of disclosure or comes within the public domain without the fault of the receiving party.
  - is already known or become known to the receiving party
  - is received from a third party having no obligations of confidentiality to the disclosing party,
  - is independently developed by the receiving party; or
  - is required to be disclosed by law or court order.

## 7. NON-EXCLUSIVITY

The relationship of the parties under this MOU shall be nonexclusive and both parties, including their affiliates, subsidiaries and divisions, are free to pursue other agreements or collaborations of any kind. However, when entering into a

particular research agreement, the participants may agree to limit each party's right to collaborate with others on that subject.

## **8. TERMS AND TERMINATION**

This MOU, unless extended by mutual written agreement of the parties, shall expire 3 years after the effective date specified in the opening paragraph. This MOU may be amended or terminated earlier by mutual written agreement of the parties at any time. Either party shall have the right to unilaterally terminate this MOU upon 60 days prior written notice to the other party. However, no such early termination of this MOU, whether mutual or unilateral, shall affect the obligations of the participants under any Research Agreement, Confidentiality clause as referenced in clause 6 above, or any other agreement entered into pursuant to this MOU, which obligations shall survive any such termination.

## **9. RELATIONSHIP**

IITB will be a key translation partner for DHE and DTE. Except for this clause, nothing in this MOU shall be construed to make either party a partner, an agent or a legal representative of the other for any purpose.

## **10. ASSIGNMENT**

It is understood by the Parties herein this MOU is based on the professional competence and expertise of each party and hence neither Party shall transfer or assign this Agreement, or rights or obligations arising hereunder, either wholly or in part, to any third party.

## **11. COSTS OF THE MOU**

Each Party shall bear the respective costs of carrying out the obligations under this MOU.

## **12. SIGNED IN DUPLICATE**

This MOU is executed in duplicate with each copy being an official version of the Agreement and having equal legal validity.

### 13. PUBLICATIONS AND PUBLICITY

Any use of a party's name by the other party for any publicity-related activities will be based on mutual consent.

BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.

### 14. DISPUTE RESOLUTION


To resolve any disputes which may arise during the execution of the Project under MOU, a committee comprising of the Director, Technical Education, MS, the Director, Higher Education, MS and a designated UDAAN official from IITB shall discuss and examine the issue in order to amicably resolve the difficulties/disputes that arose.

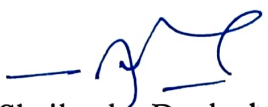
On behalf of


On behalf of


**INDIAN INSTITUTE OF TECHNOLOGY  
BOMBAY**

**DHE and DTE**


By :   
Name : Prof. Milind D. Atrey  
Title : Dean (R&D), IIT Bombay  
Date : 05<sup>th</sup> January 2023

By :   
Name : Dr. Shailendra Deolankar  
Title : Director, Higher Education  
Date :

By :   
Name : Dr. Abhay Wagh  
Title : Director, Technical Education

Witness: 

1. Prof. Ganesh Ramakrishnan  
Institute Chair Professor, Dept of CSE  
IIT Bombay

Witness : 

1. Ajit Bawiskar, Deputy Secretary.