

**MEMORANDUM  
OF  
UNDERSTANDING**

The Memorandum of Understanding is entered  
on this day of August 11<sup>th</sup>, 2022  
at Guwahati

Between



**GAUHATI UNIVERSITY (GU)**

having its registered office at-

JALUKBARI, GUWAHATI,

ASSAM - 781014 (1<sup>st</sup> Party)

And



**BODOLAND UNIVERSITY (BU)**

having its registered office at-

DEBARGAON, KOKRAJHAR,

ASSAM - 783370 (2<sup>nd</sup> Party)

This Memorandum of Understanding (MoU) is executed on the 11<sup>th</sup> day of August, 2022, between Gauhati University, Guwahati, Assam-781014, referred to as GU and Bodoland University, Debargaon, Kokrajhar, Assam-783370 hereinafter referred to as BU, through their authorized representatives, the Head of Department of Information Technology, GU and the Registrar, BU.

### **Wherein:**

Gauhati University is with its long standing reputation and experience as the pioneering University in the North-Eastern (NE) region of India, engaged in Teaching-Learning, Research & Development, and Knowledge Sharing. GU recognizes its strengths in different fields and engages itself performing Research & Development activities in different domains that will create new opportunities for the society. A resourceful environment to promote creativity and innovation amongst people is also being created while maintaining sustainable goals to enrich the lives of humanity through enhancement of knowledge.

The Department of Information Technology, GU (GUIT) has been established to facilitate a state-of-the-art infrastructure for different academic and various Research & Development programs in the field of Computer and Information Technology. GUIT also encourage output-oriented research on region-specific problems and requirements, as well as contemporary and state-of-the-art universal problems, including interdisciplinary areas.

Bodoland University (BU), Kokrajhar was created way back in the year 2009 by an Act of Assam Government with a view to providing higher education to the people of Bodoland Territorial Region (BTR) for building a strong foundation of Knowledge, Skill and best practices to excel in life. Earlier this University was a campus of Gauhati University. Though the Bodoland University is relatively young, yet it is growing very fast to provide necessary education as per the need of the hour. It gives access to quality higher education to a wide region. The University is situated at Rangalikhata, Debargaon which is about 9 KMs away from the heartland of the BTR, i.e Kokrajahr town. The university has the potential to foster liberal exchange of knowledge and ideas beyond the territorial boundaries of the BTR.

As BU is in BTR where Bodo is the main official language, so BU is responsible for the development of Bodo Language, Bodo language teaching and research and making the language resourceful. Already research works in development of Language Technology, Speech Analysis, Speech Reorganization, Speech Synthesis, Natural Language Processing (NLP) etc. in Bodo Language have been initiated by the Department of Computer Science & Technology (CST) of BU. The CST department has been involving in Bodo Language development research works at the level of Masters and Ph.D. level Dissertation/Thesis.

**Now:**

GU and BU therefore agree to establish a framework for research and development works, co-operation in the areas of mutual interest and in accordance with terms and conditions set forth in this MoU. Both the parties have come forward to work together in the form of collaboration in Research & Development works in the field of Language Technology Development, specifically in Tools and Technology Development in local languages like Assamese and Bodo.

Both Parties have agreed to do and hereby execute this MoU in order to enable Research & Development, Innovation and Training etc. in associated sector and the aforesaid parties have agreed upon the terms, assurances, obligations and commitments as set out herein below:

**1. Objective/Goal**

The Goal is to foster research and development collaboration, facilitate advancement of Knowledge and Skill on the basis of reciprocity, best effort and mutual benefit.

**2. GU and BU Agree**

- a. To work on mutual interest, in the area of Language Technology Development, specifically related to the ongoing works of Local Language Technology-Application Development being carried out in the Department of IT, GU.
- b. To exchange knowledge and information on research and development works, particularly in the design, development of Local Language tools and applications development.
- c. To exchange resource and information on the engaged R&D activities and other facilities relevant to their mutual research and development works.

- d. To jointly organize required and necessary meetings, workshops, seminars, other programmes etc. in the topics and joint engagement.
- e. To jointly propose and engage in research and training programs as well as exchange of academic resources, research, and sharing of publications.
- f. To exchange technical and other human resources.

### **3. Description of Particular Activity to be engaged in:**

It is agreed that both the parties will work for joint development of different Local Language Technology and Applications specifically, and in general Technology and Application development in the areas of AI and ML.

#### **Specific Roles and Responsibilities of BU:**

- i. BU shall specifically provide support to the ongoing Machine Translation Project, in terms of creating Large Parallel Corpus on Bodo-English and Bodo-Assamese.
- ii. BU shall arrange necessary equipment, facilities and infrastructure, including managerial support in order to creating the large parallel corpus Bodo-English and Bodo-Assamese.
- iii. BU shall work on identifying necessary expertise, trained manpower for creating the parallel corpus, and also shall look at maintaining the quality of the parallel corpus, including validating the data set.
- iv. BU shall also contribute in developing/partnering in developing AI/Machine Intelligence-based tools for Machine Translation and NLP-oriented works applicable for the Web Application/Hybrid Mobile App in the field of Natural Language.
- v. BU shall provide relevant technical know-hows, and sharing of existing technical and trained manpower, whatever available.
- vi. BU shall provide requisite documentary support for preparation of R&D reports.

#### **Mutual Agreement:**

- i. The scientific information and resultant outputs generated from the collaborative works will be shared by both GU and BU.
- ii. This MoU will come into force upon affixing the signatures of the

representatives of both GU and BU and will remain valid for three years from the date of signing the agreement. This may be executed for a further period if both GU and BU agree to the terms and conditions laid for such extension.

- iii. This agreement or its renewal and the action taken under it may be reviewed at any point in time. Modification may be made by mutual agreement and any amendment to the agreement may be formulated by exchange of letters between the two parties.

#### **4. Amendment**

Save as expressly provided in this MoU, no amendment or variation of this MoU shall be effective unless in writing and signed by a duly authorized representative of each of the Parties.

#### **5. Assignment**

Neither party shall without prior written consent of the other party, assign, transfer, change or deal in any other manner with this MoU or its rights under it or part of it, or purport to do any of the same, nor sub-contract any or all of its obligations under this MoU.

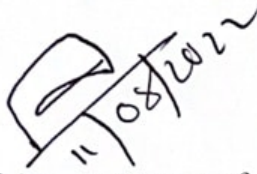
#### **6. Communication**

All the notices, demands and other communication under this agreement in connection herewith shall be written in English Language and shall be sent to the last known address, email, or fax of the concerned party. Any notice shall be effective from the date on which it reaches the other party.

#### **7. Resolution of Disputes**

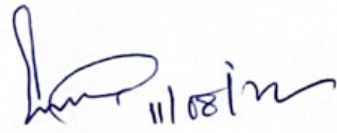
- a. This agreement shall take effect and be construed in accordance with the Laws of India and be subject to the jurisdiction to the courts at Guwahati.
- b. The dispute or difference whatsoever arises between PARTIES in relation to or in connection with this AGREEMENT both the parties shall first try to resolve the dispute/difference amicably between themselves, failing which the matter shall be referred to and settled through mediation committee; if mediation failed then through arbitration. The arbitration proceedings shall be held in accordance with the provision of Indian Arbitration and Reconciliation ACT, 1996. The venue of arbitration shall be Guwahati and Language of arbitration shall be English.
- c. This MoU indicates the intention in brief about the proposed collaboration by GU, and the possible facilitation to be extended by BU, and shall remain valid only for a maximum period of 36 months from the date of entering into MoU unless otherwise extended mutually by both the parties.

IN WITNESS WHEREOF the parties have executed and delivered this MoU in two original copies in English language as at the day and year above written.



Head of the Department of  
Information Technology,  
and Principal Investigator,  
ISHAAN Machine  
Translation (Assamese  
and Bodo) Project,  
Gauhati University  
Guwahati

Place: Guwahati  
Date: August 11<sup>th</sup>, 2022



Registrar  
Bodoland University  
Kokrajhar

Place:  
Date:

Witness:



Head, Dept. of Computer  
Science and Technology,  
Bodoland University