

MEMORANDUM OF UNDERSTANDING
between

Guru Nanak Dev University, Amritsar

and

Viksit Amritsar ("Sponsor"), Greenbelt, Maryland

Date: Marchth 2026



MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) is signed on this 15th day of March 2026
Washington DC at Amritsar by and between:

1. Guru Nanak Dev University, Grand Trunk Road, Off National Highway 1, Amritsar, Punjab-143005. The University was established on November 24, 1969. Functioning as both a residential and affiliating institution, the University's founding principles, as outlined in the Guru Nanak Dev University Act of 1969, underscore its mandate to provide education and foster research across a spectrum of disciplines, including the humanities, learned professions, sciences—particularly of applied nature—and technology.

AND

2. Viksit Amritsar, Greenbelt, Maryland through Sh. Sanjeev Lakhanpal, 711, Palomino Court Davidsonville MD. Viksit Amritsar is a development initiative focused on transforming Amritsar into a modern, sustainable, and economically strong city through collaboration between NRIs, local stakeholders, and youth. It promotes growth in areas like entrepreneurship, healthcare, tourism, education, and agriculture, while also supporting social initiatives such as cleanliness and de-addiction campaigns. The initiative aims to attract investment, encourage innovation, and drive long-term social and economic progress for the city.

GNDU and **Viksit Amritsar** are individually referred to as a "Party" and collectively referred to as the "Parties".

WHEREAS

- A. GNDU in its distinguished 56-years of history has emerged as a beacon of educational enlightenment, fostering academic excellence across diverse disciplines such as Science, Arts, Management, Information Technology, Media and Industrial Technology, Environment, Planning, and Architecture. The National Assessment and Accreditation Council (NAAC), Bangalore in December 2022 re-accredited the University in its 4th cycle with CGPA of 3.85 out of 4-pointscale at "A++" the highest level grade, as per the accreditation framework of NAAC.
- B. The initiative will play a crucial role in establishing the first phase of collaboration between Guru Nanak Dev University (GNDU) and Maryland State University (USA) through Viksit Amritsar.
- C. The Parties understand the need and demand of collaborating in various areas of to engage in providing higher education and industry-relevant training in association with renowned educational institutions and industry experts.
- D. The Parties recognize the importance of each other in competency & domain knowledge, thus jointly delivering increased contribution to build general AI literacy, knowledge and contribute towards meaningful development in Amritsar and the greater Punjab state in India
- E. Viksit Amritsar along with UMD have decided to enter into this Agreement, pursuant to which UMD shall create, maintain, and host the Certificate in Artificial Intelligence Essentials ("Program"), a non-credit professional certificate program, in accordance with the terms and conditions of this Agreement.
- F. The Parties wish to collaborate for the above stated purpose and are desirous of recording the broad terms of their understanding and have therefore agreed to execute this MoU.

NOW IT IS HEREBY AGREED AND UNDERSTOOD BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. OBJECTIVES

The Parties have entered into this MoU in consideration of the mutual covenants set forth hereinafter.

- 1.1. To engage the students in providing higher education and industry-relevant training in association with renowned educational institutions and industry experts.
- 1.2. The Program shall be conducted in an online, synchronous and asynchronous format and shall be developed, delivered, and maintained by UMD in compliance with the regulatory norms and statutory rules and regulations of concerned authorities and statutory bodies applicable at the relevant time, and in accordance with the terms of this Agreement.

2. **ROLE AND RESPONSIBILITY OF THE PARTIES**

The Role and responsibility of the Parties shall be as under:

2.1. **ROLE AND RESPONSIBILITIES OF GNDU, Amritsar**

To ensure the effective conduct of the Professional Certificate in Artificial Intelligence Essentials course by providing students, computer labs, required logistics, and other supporting facilities.

2.2. **ROLE AND RESPONSIBILITIES OF VIKSIT AMRITSAR**

- (a) To provide the Professional Certificate in AI Essentials where the participants will be able to build general AI literacy and knowledge. At the completion of the program, participants will be able apply skills and AI knowledge to develop AI solutions to support, enhance, and contribute towards meaningful development in Amritsar and the greater Punjab state in India. The program will be delivered fully online via Zoom and will have both synchronous and asynchronous activities. The 6 modules program will be delivered over a 6 weeks period in Summer 2026. The program will cover approximately 36 hours of training and learning, broken down into about 6 hours of work per week. Before starting the program, participants will have proficient programming experience (python is preferred) and intermediate level mathematics (algebra and calculus) and computing background. They will have a competitive academic transcript and complete an application to be eligible. Selection of Participants The program will consist of 30 highly qualified participants. Viksit Amritsar and UMD will collaborate to oversee the application process and to select qualified applicants.

Program Learning Objectives:

1. Summarize how LLMs work
2. Compare advanced AI models
3. Explain the training process required for an AI model
4. Understand different methods of reasoning in AI
5. Apply fine-tuning techniques to AI models
6. Summarize requirements for models to generate vision images
7. Solve business challenges through the use of different kinds of intelligence and AI tools

Modules: Professional Certificate in AI Essentials

1. Foundations of AI (6 hours) provides a comprehensive introduction to artificial intelligence, exploring types of AI systems and their respective capabilities and limitations. Participants will master essential terminology including algorithms, models, training data, and neural networks while developing a clear understanding of how AI systems reason and make decisions. The course culminates with an explanation of Large Language Models (LLMs)

2. Advanced AI Models and AI Performance, Reliability, and Security (6 hours) explores cutting-edge AI models including transformers, diffusion models, and autoencoders, while comparing their strengths, applications, and trade-offs. Participants will examine the technical mechanisms behind these advanced models and develop practical skills for evaluating their performance. The course also addresses challenges in AI deployment, including hallucinations, security vulnerabilities, jailbreak attacks, and retrieval augmented generation (RAG) techniques.

3. AI Training Data (6 hours) provides an in-depth exploration of the data lifecycle that powers AI systems, from initial data preparation and cleaning to the optimization techniques that enhance model performance. Participants will gain experience with the complete training process required to build effective AI models, understanding how raw data is transformed into structured datasets, how hyperparameters are tuned, and how models learn patterns through iterative training. **4. Fine-Tuning Techniques for AI Models (6 hours)** equips participants with advanced methods to customize and optimize pre-trained AI models for specific applications. Participants will explore reinforcement learning, full fine-tuning, and gradual unfreezing strategies while developing practical troubleshooting skills to address common training

challenges. The course emphasizes post-training analysis techniques that enable participants to evaluate model performance, identify areas for improvement, and ensure their fine-tuned models deliver reliable results in production environments.

5. Generating Images (6 hours) explores the technology behind AI image generation, covering image understanding, model architectures, and the text encoder systems that translate prompts into visual outputs. Participants will examine sampling and inference algorithms that determine how models create images and learn the key requirements for generating and refining high-quality vision outputs.

6. Capstone Exercise (6 hours) challenges participants to apply their new AI knowledge to solve a real-world business problem by fine-tuning an open-source LLM using provided case study data. After identifying a field of interest, participants will identify potential limitations and ethical considerations while developing a plan that uses different types of intelligence and AI tools. This capstone synthesizes concepts into AI problem-solving for business challenges.

- (b) **Selection of Participants:** The program will consist of 30 highly qualified participants. Viksit Amritsar alongwith UMD will collaborate to oversee the application process and to select qualified applicants.

3. TERM

This MoU shall be effective from the date of execution and will be valid for five years. Either Party may terminate the Agreement by giving 90 (ninety) days' notice to the other Party. The term may be extended with mutual agreement between the Parties.

4. FINANCIAL IMPLICATION

- 4.1. Neither of the Parties will have any upfront initial financial commitment.
- 4.2. There will not be any financial liability of Guru Nanak Dev University, Amritsar. However, University will coordinate and monitor selection of GNDU students and conducting examinations.
- 4.3. Financial impact, if any, will be separately worked out and mutually agreed in writing between the Parties for each of the identified activities provided in this MOU and shall be annexed as an addendum to this MOU, as necessary.

5. CONFIDENTIALITY

- 5.1. Each Party hereby undertakes with the other Party to maintain the Confidential Information in strict confidence and save as provided herein, not to divulge any of the Confidential Information to any third party and in addition not to communicate, indicate or suggest to any third-party of the negotiations under this MoU.

“**Confidential information**” means any and all information in whatever form, whether disclosed in confidence in writing or whether eye readable, machine readable or in any other form including, without limitation, the method of operation, the various applications, processes, strategies, data, know-how, specifications, literature and any other material made available by one Party to other Party under this MoU and includes the terms of this MoU.

All confidential, non-public or proprietary information (regardless of how the information is stored or delivered), disclosed to the receiving Party by the disclosing Party or with which receiving Party comes into contact before, on or after the date of the Agreement relating to the business, technology or other affairs of the Party providing the information, that, (a) if in tangible form, is clearly marked by the disclosing Party as confidential Information at the time of disclosure, and (b) if disclosed verbally, is identified as being Confidential Information at the time of disclosure. All confidential Information shall remain the disclosing Party's exclusive property. The receiving Party shall receive in confidence any confidential Information of the Disclosing Party and shall use it only for purposes of this Agreement. The receiving party shall ensure that its authorized employees are made aware of the confidentiality obligations under this Agreement. If an authorized employee refuses to comply with the confidentiality obligations under this Agreement, the said authorized employee shall not be provided with any confidential Information by the receiving Party. Subject to the terms of this Agreement, at any time during or

after the Term of this Agreement, at the disclosing Party's request, receiving Party shall return promptly to the disclosing Party or completely and permanently destroy any copies of such confidential Information in written, graphic or other tangible form, providing to the disclosing Party a list of all such material destroyed

6. FUTURE COOPERATION

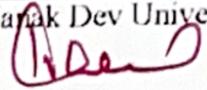
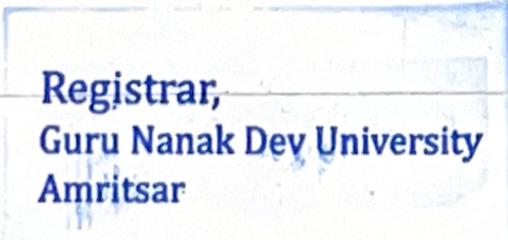
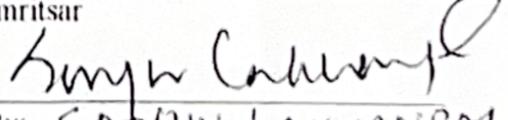
The present MoU describes the general condition and arrangements for future cooperation between the Parties. The details of effective implementation of this MoU including consideration shall be jointly worked on mutually acceptable terms and conditions between the Parties.

7. GENERAL TERMS

- 7.1. Nothing in this MoU obligates either Party to commit or transfer any fund, assets, or other resources in support of projects or activities between the Parties unless expressly stated in this MoU.
- 7.2. Use information received about Students only for the purposes of the educational Program as described in this Agreement and keep all Students' records confidential in accordance with the provisions of the Family Education Rights and Privacy Act. The Parties undertake to comply with the relevant data protection laws and regulations and keep personal data secure and only use such data in accordance with such applicable data protection laws and regulations.
- 7.3. Both the Parties have full power and authority to enter into this MoU and take any action or execute any document required by the terms hereof including performing all their obligations in accordance with the terms herein.
- 7.4. The activities of this MoU must be carried out in accordance with the applicable laws and regulations.
- 7.5. All notices given pursuant to this MOU, shall be in writing and shall be furnished either by hand, registered post, courier, or email (as may notified by a Party to the other Party) to the address mentioned at the beginning of this MoU or such other address as may be notified by a Party to the other Party.
- 7.6. No change can be made to this MoU without written consent and duly signed by all the Parties. Additions, deletions and/or alterations to this MoU may be affected with the written agreement of the Parties. Documents containing such additions, deletions and/or alterations and signed by all the Parties shall form addenda to this MoU and be deemed to be part of this MoU.

8. GOVERNING LAW, JURISDICTION AND DISPUTE RESOLUTION

- 8.1. This MoU shall be governed by and construed in accordance with the laws of India. The courts at Amritsar shall have exclusive jurisdiction on the matters arising from or in connection with this MoU.
- 8.2. Any divergence or difference derived from the interpretation or application of the MoU shall be resolved by arbitration between the parties as per the Arbitration Act, 1996. The place of the arbitration shall be at District Head Quarters of the First Party. This undertaking is to be construed in accordance with Indian Law with exclusive jurisdiction in the Court of Amritsar.

Guru Nanak Dev University, Amritsar Sign:  Signed By: <u>KARAMJIT SINGH CHahal</u> Date: <u>17th MARCH 2026</u> Place: Amritsar Stamp: 	Viksit Amritsar Sign:  Signed By: <u>SANDIV LAKHPATI</u> Date: <u>March 15th 2026</u> Place: <u>Amritsar</u> <u>Wardhyan D. C.</u> Stamp:
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