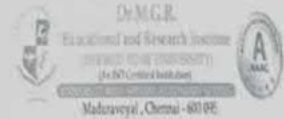


DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING,
Dr.M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE
AND
SMARTBRIDGE

MEMORANDUM OF
UNDERSTANDING

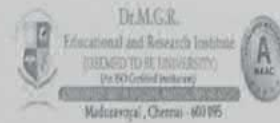


3rd January, 2019

SmartBridge Educational Services Pvt. Ltd.
3rd Floor, Narmada Arcade, Snehapuri Colony
Nacharam Main Road, Hyderabad - 500076
Phone: +91-9849334539
Email: info@smartbridge.com

Department of Computer Science and Engineering,
Dr.M.G.R.Educational and Research Institute,
Periyar E.V.R.High Road, Maduravoyal,
Chennai - 600 095
Phone : +91-8838868652
Email: hod-cse@drmgrdu.ac.in

2021.08.09 15:45



This Memorandum of Understanding ("MOU") is signed on the 3rd day of January 2019 by DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING OF Dr.M.G.R.EDUCATIONAL AND RESEARCH INSTITUTE ("DEPT OF CSE") having its campus at Periyar E.V.R.High Road, Maduravoyal, Chennai – 600 095.

and between

SMARTBRIDGE EDUCATIONAL SERVICES PVT LTD. ("SMARTBRIDGE"), having its registered office at Plot No .550/F, Road.No.92, Jubilee Hills, Hyderabad, Telangana – 500096

SMARTBRIDGE and DEPT OF CSE are sometimes hereinafter referred to individually as a "Party" or collectively, the "Parties".


Background

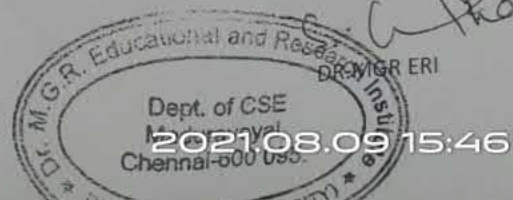
SMARTBRIDGE is an edTech organization with a vision to bridge the gap between academia & industry. Our outcome-based experimental learning programs on emerging technologies (IoT, Machine Learning, Data Science, Artificial Intelligence, Edge Computing) are building skilled entry - level engineers, for the corporate world. SmartBridge is in mission to build technology communities in academia to encourage students towards innovation & entrepreneurship. Since inception, we have trained thousands of students, faculty and working professionals on emerging technologies via technical boot-camps, hackathons and professional development programs.

Following are our Services for Academia & Students

- Technology Bootcamps
- Hackathons
- Hands-on Training Programs
- Professional Development Programs
- Summer Practice Schools
- Industrial Project Consultation

DEPT OF CSE aims to impart high quality education to post-graduate and under-graduate students as well as to carry out cutting edge technology in research on various disciplines of Computer Science and Engineering. The Department offers three Under-Graduate and three Post-Graduate programmes. All the programmes focus on preparing the students for a wide range of IT careers and equipping them and molding tomorrow's technocrats with high caliber at all levels to meet the expectation of stakeholders.


SMARTBRIDGE



The Department offers UG,PG courses in B.Tech CSE and ISDF, M.Tech CSE, ISCF, B.Sc (ISCF), M.SC (CS) and Ph.D by research. The B.Tech CSE programme of CSE Department accredited by National Board of Accreditation (NBA).

Depending upon the specializations, the Head of the Department approach the industries related to their departments and forge alliances with them for R & D activities found to be usefully to the industry and the institution. At times the consultancy work is also taken from the industries depending upon the capabilities of the faculty and the availability of infrastructure in the institution and the complexity of the problem. Besides the alliances forged by the individual departments the college also entered into MoU with certain industries and also with some educational institutions of standing in India and elsewhere.

Both SMARTBRIDGE and DEPT OF CSE, Chennai recognized the need for:

- 1) Pooling and sharing their knowledge and skills for constant development and upgrading in the field of Emerging Technologies.
- 2) Close cooperation between the industry and the technical education system
- 3) Educating & training of students, in practical environment, to enrich teaching methodologies, to help faculty development and to make the training more employment oriented

In appreciation of the above and in the furtherance of the common desire for improving the quality of graduating Science & Engineering students, SMARTBRIDGE and DEPT OF CSE have agreed to join hands. Both parties have explored the possibilities of building a synergistic relationship and have agreed to enter into MOU with the following joint responsibilities:

- 1) With a view to provide inputs to improve the quality of education and to impart industry related training, SMARTBRIDGE will provide their expertise on "Utilization of Lab & Incubation center" to DEPT OF CSE.
- 2) With a view to introduce students to industry, SMARTBRIDGE will provide "Academic Projects & Internships" to DEPT OF CSE students. Further DEPT OF CSE students and faculty will participate in developing modules of a larger project and submit the completed work as consultancy project. To assist this activity DEPT OF CSE guide and students will work in the premises of SMARTBRIDGE for the purpose of coding, assembly, integration, and testing of the project as and when required.
- 3) DEPT OF CSE will provide required support in the survey of technical field, design, concepts and the methods of evaluation of the project.
- 4) SMARTBRIDGE will suggest the required changes in the curriculum and help DEPT OF CSE in providing education to it's students as required by the industry.
- 5) Both parties agree to maintain confidentiality of information and the information can be released only with mutual agreement.

1. PURPOSE AND SCOPE:



This Memorandum of Understanding (MOU) sets for the terms and understanding between the SMARTBRIDGE and DEPT OF CSE to engage in following undertaking category.

- a) Project and Product Development activity for 3rd and 4th year engineering students of CSE and ISDF branch along with students from related M-Tech programs. This can be done with mutual consent between SMARTBRIDGE and DEPT OF CSE.
- b) Engaging in consultancy work for a specific scope of services and product development which will be signed by both parties on need based terms.
- c) Electives Program to be designed and executed on emerging trends such as IoT System Design. Workshops, guest lectures, Faculty Development Program (FDP), industrial trainings on latest technology and final year project assistance etc.

SMARTBRIDGE and DEPT OF CSE both agree to work in collaboration in building a center of excellence (COE) in mutually identified areas at Dr.M.G.R. ERI campus.

2. VALIDITY

This MOU is valid for Two (2) years from the date of signing of this MOU. Thereafter the MOU may be renewed for such term and on conditions as may be agreed between the Parties.

3. NO ASSIGNMENT

Neither party without the written consent of the other may assign either the benefit or the burden of this MOU to anybody.

4. TERMINATION


Either party may terminate the MOU for cogent and logical reasons, by giving to the other party 30 days' notice in writing.

5. ENTIRE AGREEMENT

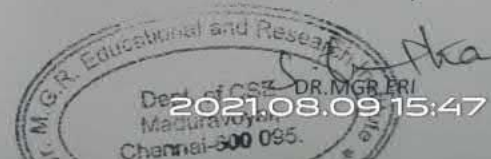
- a) This document represents the entire agreement between the Parties regarding the subject matter of this MOU and can only be amended or modified by an agreement in writing signed by the Parties hereto.
- b) A co-ordination committee consisting of one faculty member of DEPT OF CSE and one officer nominated by SMARTBRIDGE shall be constituted to implement and give effect to objectives of this MOU.

6. LEGAL EFFECT

This document is not intended to impose any legal obligation whatsoever on either party (whether based in contract, tort or under statutory law). The parties do not intend to be bound by any agreement until both agree to and sign a definitive written contract. Neither party can rely on any



SMARTBRIDGE



Dr.M.G.R. Educational and Research Institute
Dept. of CSE, DR.M.G.R. ERI
Madhavoyal,
Chennai-600 095.

2021.08.09 15:47

promises inconsistent with this paragraph. This paragraph supersedes all other conflicting language.

DECLARATION

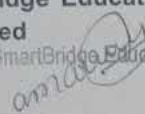
Both SMARTBRIDGE and DEPT OF CSE located at Chennai are pleased to enter into this Memorandum of Understanding and believe that such an understanding would lead to a continuing period of meaningful interaction, cooperation and exchange of information and ideas. Both will value the spirit of this agreement and would strive continuously to develop the various facts of this MOU.

This agreement can be terminated with consent of the management by either party with one month prior notice and written information without any liability on each other.

SIGNATURES

This MOU will come into effect on the day date of signature of the representative of both parties as given :

For SmartBridge Educational Services Private Limited


Signature: 

Name: Mr. Amarender Katkam Authorized Signatory

Title: Founder, CEO

Date:

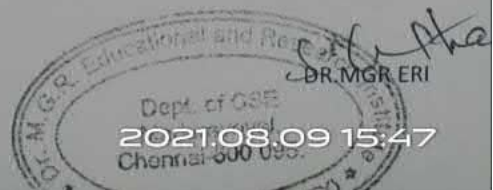
For CSE Department of Dr.M.G.R. ERI

Signature: 

Name: Dr. S.Geetha

Title: Head of the Department

Date: 03.01.2019



SMARTBRIDGE can be requested to provide proprietary and licensed software/hardware access for speedy completion of the Services.

Representation and Warranty.

DEPT OF CSE represents and warrants to the SMARTBRIDGE that it is under no contractual or other restrictions or obligations which are inconsistent with the execution of this Agreement or which will interfere with the performance of the Services.

CONSULTANCY PERIOD

Commencement

This Agreement shall commence on the Effective Date and shall remain in effect until the completion of the Services or the earlier termination of this Agreement as provided in Article 2 of MoU.

Termination

This Agreement may be terminated by either party with 30 day notice in writing, if there is any breach in the terms of the Agreement, NDA, unsatisfactory performance of the Second party ie. DEPT OF CSE or failure on the part of the First party i.e. SMARTBRIDGE to honour the stipulated conditions, timely payments, facilities to be provided etc. or any sort of inconvenience caused to the second party for smooth extension of their agreed consultancy service. The payment for the period of service rendered in the month shall be settled, without having any dues to the Second party kept in pending

Effect of Termination

Upon the effective date of termination of this Agreement, all legal obligations, rights and duties arising out of this Agreement shall terminate except for such legal obligations, rights and duties as shall have accrued prior to the effective date of termination and except as otherwise exclusively expressed in this Agreement.

CONSULTANCY FEE AND EXPENSES

Consultancy Fee

In consideration of the services to be rendered hereunder, the Company shall pay consultant a consultancy fee of **INR 53053 (Fifty Three Thousand Fifty Three Rupees)** for the Services provided, which is inclusive of all expenses like hardware procurement, travel, software tools and applicable taxes.



Expenses

Consultant shall be entitled to reimbursement for all pre-approved expenses reasonably incurred in the performance of the Services, upon submission and approval of written statements and receipts. All the expenses are covered in the Consultancy fee mentioned.

Payment

The payment shall be made by the SMARTBRIDGE for the work scope agreed which is divided into three phases of Services as specified in Appendix A. Upon completion of each phase of the work product the company shall release the agreed payment as mentioned in the Appendix A. All such payment requests shall be due and payable within fifteen (15) working days after receipt thereof by the Company.

Force Majeure

Either Party shall be excused from any delay or failure in performance required hereunder if caused by reason of any occurrence or contingency beyond its reasonable control, including, but not limited to, acts of God, acts of war, fire, insurrection, strikes, lock-outs or other serious labor disputes, riots, earthquakes, floods, explosions or other acts of nature. The obligations and rights of the Party so excused shall be extended on a day-to-day basis for the time period equal to the period of such excusable interruption. When such events have abated, the Parties' respective obligations hereunder shall resume. If the event of the interruption of the excused Party's obligations continues for a period in excess of 30 calendar days, either Party shall have the right to terminate this Agreement upon 10 calendar days' prior written notice to the other Party.

Assignment

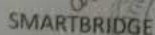
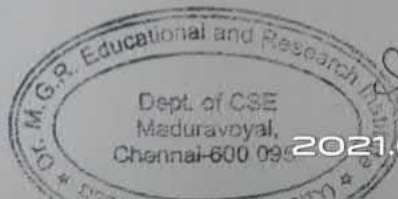
The Services to be performed by Consultant hereunder are personal in nature, and Company has engaged Consultant as a result of Consultant's expertise relating to such Services. Consultant, therefore, agrees that it will not assign, sell, transfer, delegate or otherwise dispose of this Agreement or any right, duty or obligation under this Agreement without the Company's prior written consent. Nothing in this Agreement shall prevent the assignment by the Company of this Agreement or any right, duty or obligation hereunder to any third party.

GOVERNING LAW AND DISPUTE RESOLUTION

Disputes under this agreement shall be resolved by discussion between such senior management functionaries as the Parties may nominate for that purpose. If they fail to resolve a dispute amicably within 15 days of its commencement, the parties shall refer the dispute to binding arbitration to a sole arbitrator at a place mutually agreed upon by both parties.

GENERAL

This Agreement may not be modified other than by a written instrument executed by duly authorized representatives of the Parties. Should any provision of this Agreement be held by a court of competent jurisdiction to be illegal, invalid or unenforceable, such provision may be modified by such court in compliance with the law giving effect to the intent of the Parties and

 SMARTBRIDGE

DR.MGR ERI

2021.08.09 15:48

enforced as modified. All other terms and conditions of this Agreement shall remain in full force and effect and shall be construed in accordance with the modified provision.

Further, this Agreement to be read with the detailed and mutually agreed conditions laid down in the Confidentiality and Non-Disclosure Agreement, appended and to be entered between the parties, the conditions of which binding upon both the parties.

IN WITNESS WHEREOF, and intending to be legally bound, the Parties have duly executed this Agreement by their authorized representatives as of the date first written above.

For SmartBridge Educational Services Private Limited

For SmartBridge Educational Services Pvt.Ltd.

Signature: _____

Name: Mr. Amarender Katkam

Title: Founder, CEO

Date: _____

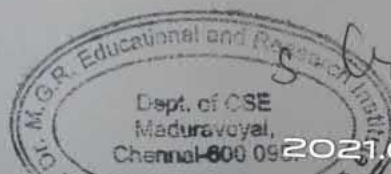
For CSE Department of Dr.M.G.R. ERI

Signature: _____

Name: Dr. S.Geetha

Title: Head of the Department

Date: 03.01.2019



APPENDIX - A

PROJECT SCOPE & SERVICES

Project Title:

Development of Intelligent Image & Video Processing Algorithm for Intelligent Video Cameras based on Neural Networks with EDGE Deployment

Project Description:

In this project the consultant need to develop a light weight neural network based algorithm to process the video frames captured by a 720P HD camera. The algorithm shall be developed as a python package to which can give high performance in EDGE level deployment with GPU based processing.

The algorithm shall have following sub modules

- a. People Detection
- b. Gender & Age Estimation
- c. Dressing Style Classifier
- d. Dressing Colour Classifier
- e. Dressing Pattern Classifier

The consultant shall also build the necessary dataset to build the classification models.

Requirements:

- a. Algorithm shall be supplied as a python package with sub modules for each functionality along with mathematical equations.
- b. Classification algorithms shall be based on Convolutional Neural Networks (CNN) built using latest stable package of Tensorflow on GPU platform
- c. The dataset built shall be built specific to India (Faces & Dressing Styles)
- d. The Model shall give atleast 95% accuracy on random test data provided by the Company on EDGE Platform like NVIDIA Jetson TX2 / INTEL VPU Platforms

HARDWARE PROCUREMENT / SUPPLY

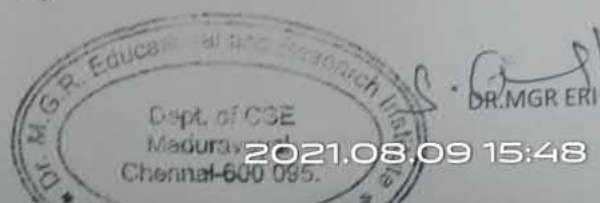
The consultant shall use following hardware to build / deploy the models

- a. NVIDIA Jetson TX2

The hardware will be supplied to consultant on returnable basis at the end of the project the consultant shall return the hardware to the company.



SMARTBRIDGE



Dr. M.G.R. Educational and Research Institute
Dept. of CSE
Madurai-600 095.

DR.MGR.ERI

2021.08.09 15:48

DELIVERY SCHEDULE & PAYMENT TERMS:

The consultant shall deliver the project as per the delivery schedule mentioned in the table and he will be paid based on the milestones against the invoice:

Milestone	Delivery Schedule, (From signing of Agreement)
Development of People Classification Algorithm	30 Days
Development of Gender & Age Estimation Algorithm	50 Days
Development of Dataset for Fashion Classification	80 Days
Development of Dressing Style Classifier	100 Days
Development of Dressing Colour Classifier	120 Days
Development of Dressing Pattern Classifier	140 Days
Final Integration & Testing on Specified Hardware	160 Days
Final Acceptance & Handover	180 Days

DEVELOPMENT TEAM & DATA PRIVACY:

- The consultant shall identify the best team with a project manager for working on above scope with prior declaration of their names & experience to Company. The consultant shall execute an NDA document with team members and same shall be submitted to Company.
- All the development works shall be maintained securely and un-authorized access to the algorithms shall be avoided.
- Any change in team shall be intimated to the company with a prior notice

PROJECT REVIEW MEETINGS:

- The consultant & company representatives shall meet every fortnight at either company or consultant premises to review the project status and to provide any inputs necessary same shall be recorded as Minutes of Meetings.
- All the communication between company & consultant shall happen through official emails of either parties.



SMARTBRIDGE



M.G.R. Educational and Research Institute
Dept. of IT
Maduravoyal,
Chennai - 600 095
2021.08.09 15:49
DR. MGR ERI