APPLICATION FORM
(JOINT RESEARCH)
HIGH POTENTIAL INDIVIDUALS GLOBAL TRAINING PROGRAM)

AGREEMENT
As stated above, I submit this application form to IITP that conducts "High Potential Individuals Global Training Program" supported by Ministry of Science, ICT in South Korea. IITP may disclose the information below to the public for the purpose of providing information and matching a research partnership between your institute and a Korean university.   * IITP : Institute for Information & communications Technology Planning & Evaluation

Printed Name of Chief of Research	Dr. Joon Chung	Date(mm-dd-yyyy)	01/27/2020
Signature of Chief of Research			

☞ *(Note) This application is to identify the willingness to participate in this research and to find a research partnership for research institutes in Korea. Therefore, in its sole discretion, it is acceptable to contain only minimal information. (max. 3 pages)*

1. Research Title	Development of Artificial Intelligence (AI) based Augmented and Virtual Reality (AR/VR) aircraft cabin interior design optimization system						
2. Research Area	**A.I.**	**Big Data**	**Cloud Computing**	**Block Chain**	**AR/ VR**	**ICT/SW Convergence**	**Other ICT /SW**
	X				X		
3. Chief of research	Title	Professor	Contact		E-mail : j3chung@ryerson.ca		
	Name	Joon Chung			Tel : 416-979-5000 Ext. 7213		
4. Affiliation	Name	Ryerson University	Classification		(X) University　(　) Research Institute (　) Industry　(　) ETC.		
5. Capacity for students (5 or less)	3 (AI, AR/VR, aircraft design)		**Support for students** *(all necessary)*		(X) Visa support (X) Research Mentoring (X) Research Space (X) Accessibility to Research equipment		

6. Research Objective	The objective is to use AR/VR in an Aerospace cabin interiors for both commercial and business aircraft. AI is used to perform automated certification and design optimization in terms of article sizing and placement. The cabin interiors and certification compliant based results would be showcased and simulated in an AR/VR environment.
7. Research Summary	Mixed-Reality Immersive Motion Simulation (MIMS) Laboratory of Ryerson University is focusing on the AR/VR application and aircraft simulation with AI utilization for many years (https://people.ryerson.ca/j3chung/index.html). The goal is to create an automated AR/VR interior certification tool. A major issue in the aerospace environment is the lack of simulation and optimization in the cabin interior environment. Through this research we would like to develop an AI based certification and optimization tool that is delivered through the AR/VR environment. - The aircraft cabin and cabin interior parts will be constructed in AR/VR environment - Various configuration of the aircraft cabin will be compared in the VR environment - A designer will check the space, distance, and human factor of each aircraft cabin component in VR environment - The aircraft cabin mock-up of Ryerson University will be utilized to evaluate the cabin interior design and evaluation - The AI algorithm will be utilized to identify each component of aircraft cabin and provide the related certification requirements - The database of certification requirements from various certification documents such as DO-160, DO-313, etc. will be developed

8. Need for funding from Korean government	- To support the student's research activities
	- Living expense
	   • Transport
	   • Accommodation
	   • Food
	- To purchase all necessary AR/VR and Computer Equipment required for the research.

9. Request for Korean Universities	- The selection of students studying abroad should be conducted after mutual consultation, and please cooperate as much as possible to prepare for VISA.