Mainstreaming AI Skills In Engineering Education

Prof. Deepak Garg Chair: Computer Science Engineering Department, Bennett University, India Director: leadingindia.ai Head: NVIDIA-Bennett Research Center on AI Mainstreaming AI skills in Engineering Education-Talking Points

Requirements to mainstream AI Skills in Engineering Education Is there a case study of successful systems. If yes, then how are they doing?

How we see it in context of "Future Education Systems"





Requirements to mainstream AI Skills in Engineering Education

Modules required for mainstreaming AI Skills

- Understanding Real AI and differentiating from AI marketing (Angel or Demon)
- Special Skills for Understanding human life, emotions, culture in a Automated and Robotized Work place
- Technical Skills to create Al enabled cyber-physical systems

Modules required for mainstreaming AI Skills

- Super Managers required with strong Decision making, Fast Judgement skills and deep understanding of humanhuman and human-machine relationship in a AI enabled world
- Designing frameworks and ecosystem for man-machine systems



- IoT
- Cloud Computing
- Robotics
- Automation
- Blockchain

- Deep Learning
- Machine Learning
- Data Science
- Mechatronics
- AR/VR



Is there a case study of successful systems?



Making Deep Learning and AI skills mainstream in India to fulfill trilateral needs of entrepreneurship, Industry academia partnership and application-inspired Engineering Research



Objectives

1. To make cutting edge skills and super computing infrastructure available to the wider community of academicians and researchers through a network of 10 collaborators, 100 leads and 1000 basic partner institutions across India. It will result in trained manpower of 10000 instructors which in turn can train 1 million students.

2. To initiate, sustain and nourish research groups in the area of Artificial Intelligence. based on the financial inputs by respective institutions, some of them can grow as a good research center.

3. To motivate the learner community for exploiting the potential of start-ups and innovations in this area and connecting them with the real life problems of that industry is trying to solve. Overall it will enhance the content, quality, capacity and collaboration of Indian Engineering education ecosystem.

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Collaborators	Those who want to be seen as leaders and resource institutions for Deep Learning and Al Research	
Zonal Partners	Those who want to flourish with quality research groups along with Skilling in Deep learning and Al	
Basic Partners	To create a pair of instructors to teach Al and Deep Learning in the institutions	
Mentors	Experts with experience to mentor research groups on Al	
Learners	Individuals who want to learn and build their career in Deep Learning	

Leadingindia.ai : Making Deep Learning and AI skills mainstream in India to fulfil trilateral needs of entrepreneurship, Industry academia partnership and application-inspired **Engineering Research**

Success Story

Govt Leaders have recently described it as largest skilling and Research platform for Deep Learning and AI

Has grown to 20 times of its original scale

Has attracted the attention of Industry, Startups , Govt and Academia alike

Has been approached by few countries to replicate

More than 50 News items have appeared in Different main stream media outlets

20+ Workshops have been completed and 2000+ faculty has been trained

Planning to spin out as a full fledged startup in this area



NVIDIA DGX-1 V100 Super Computer 1st in India arrived at our lab in Nov 2017 Looking at the success of the Program, Amazon has sponsored Speech Technology Lab in our Research Building









AICTE Chairman Anil Sahasrabudhe Inaugurating leadingindia.ai website at Bennett University Campus Niti Ayog Chief Amitabh Kant Inaugurating Al Startup Conclave at Bennett University





Galaxy of International Speakers at our International Conference on Transformations in Engineering Education

ICTIEE 2018

INTERNATIONAL CONFERENCE

Platinum

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IANUARY 201

BRENNETT

ON TRANSFOR

100

Gold

IN IN ENGINEERING EDUCATION



One of the workshop held at Pune @Symbiosis University



Popular Implementations





Personal Assistant

Recommendations



Identity Systems



Robo-Assist



Chat-Bots



Data Visualization



Sentiment Analysis



Smart Payments



How we see it in context of "Future Education Systems"

Outcomes

Innovative Research in Pedagogy for mini-MOOCs blended with Instruction Strategies to enhance Quality of Higher Education-RAENG PROJECT (2016-Mar 2018)

- •Celebrating Learning
- Provoking conversation
- Learning by doing
- Localization

Key characteristics of Future Education Systems

Engineers need to be taught as Solution Architects for local problems

Equality-conscious and with a Human Centric Al-Systems

Face to Face Education at Huge Premium

Pace of change is going to outpace the skilled instructors (that will mean that Skilling will not be the key driver)



We will need Champions for particular Problem domains instead of course instructors

Department/School structure needs to be transformed. We may have Units like 'Usable Water For all', 'Clean Energy For all', 'Smart Transport For all'

Examination system where they just need to reproduce facts need to be done away with and totally shifted to project base learning

Solutions will be local but the knowledge and technology will be of International level and standard

Key Challenge of Future Systems-Education Leaders

Education Leaders at institutional, State and National levels

(it will be absolutely necessary that they understand and experience the impact, dimensions and perspectives of the key points mentioned in the previous slides.)

What we can do together

Replicate, Enhance and Customize similar framework to take your nation or organization on the path to embrace new technologies

Explore collaborations with Companies of respective countries who will like to get access to our 1000 strong institutional network and want to engage with us for trained manpower, joint projects, student and faculty Exchange, Data and knowledge sharing

Collaborations at higher level involving privacy and ethical issues, legal frameworks for AI, Future of jobs and education



Thank You

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