

Cross-Border Data Flows Fundamental For AI Growth In India

POST CONFERENCE REPORT

SUMMARY

- The Dialogue, in collaboration with Microsoft, organized a conference on AI, Privacy and Cross-Border data flows and also released a Working Paper titled “Intersection of Artificial Intelligence with Cross-Border Data Flow and Privacy”, at the Constitution Club of India.
- This was a conference around the theme of AI driven innovation and how cross-border data flows and privacy are critical to drive AI growth in the future.
- The discussion focused on key sub-themes such as Value of Data to AI & Innovation; Legal and Ethical Challenges around AI Deployment; Cross-Border Data Flows fundamental to AI growth; Policy framework to facilitate AI’s success - Restrictive Vs Expansive?

OVERVIEW

India currently is at crossroads in terms of taking the next step towards making the country realise the benefits of emerging technologies such as Artificial Intelligence. The NITI Aayog paper rightly identified AI as an important tool to meet India’s development agenda.

Artificial intelligence (AI) is the concept used to describe computer systems that are able to learn from their own experiences and solve complex problems in different situations – abilities we previously thought were unique to mankind. And it is data, in many cases personal data, that fuels these systems, enabling them to learn and become intelligent.

The findings of the paper suggest that privacy can complement innovation in AI along with the fact that cross-border flow of data is imperative to drive AI growth in the future. Every day, large amounts of data flow course through the internet, over borders to power technologies that is leveraged for AI development and deployment. This data may originate from many sources located in multiple jurisdictions, making it imperative that data can move

freely across borders. At the same time, with rising data collection and storage, doctrinal notions around 'consent' and 'privacy notices' should be considered. Privacy by design techniques can be incorporated at the level of privacy notices but also at each level of information flow till its storage and processing stage.

ABOUT CONFERENCE

The discussion in the conference revolved around the value of data for AI, importance for cross-border data flows, the ethical, legal and privacy aspects around AI deployment and a policy framework going forward. The discussions from the conference will be inputted towards the completion of the working paper for final publication in January.

The conference was divided into following sub-themes:

- Value of Data to AI and Innovation
- Cross-Border Data Flow fundamental to AI growth
- Ethical and Legal Challenges around AI Deployment
- Policy Framework to Facilitate AI's Success - Restrictive Vs. Expansive

The keynote address were given by Mr. Kalikesh Singh Deo, MP Lok Sabha and Dr. Neeta Verma, Director-General, National Informatics Centre, Ministry of Electronics and Information Technology, while Dr. Narendra Jadhav, MP Rajya Sabha, gave the valedictory remarks.

Other officials from the government included Dr. Avik Sarkar, NITI Aayog and Mr. Atul Tripathi. The conference saw participation from industry such as Ms. Bishakha Bhattacharya, IBM, Mr. Venkatesh Krishnamoorthy, BSA Software Alliance, Ms. Anubhuti Bhrany, HP, as well as civil-society professionals such as Mr. Saikat Datta, Asia Times, Mr. Naman Aggarwal, Access Now, Mr. Apar Gupta, Internet Freedom, Mr. Amol Kulkarni, CUTS International, Mr. Rahul Sharma, IAPP, Ms. Gunja Kapoor from Pahle India Foundation, Mr. Adnan Ansari, 9.9 Insights, Ms. Anulekha Nandi, Digital Empowerment Foundation and Mr. Harsh Bajpai, The Dialogue. The event witnessed a strong participation from the legal community comprising of Ms. Meenu Chandra, Adyopant Legal, Mr. Prasanna S, Independent Lawyer, Ms. Pritka Kumar and Mr. Kushan Chakraborty from Cornelia Chambers, Ms. Arya Tripathi, PSA Legal and Mr. Aaron Kamath, Nishith Desai Associates.

The tech community saw participation from Dr. Gaurav Gandhi, Mlabs and Mr. Pranav, Analytics Vidhya.

Panel 1: Value of Data to AI and Innovation

The first panel focused on identifying the importance of data for AI and the innovation it can drive in the future. Another key discussion that came out of this panel was the value proposition of data. When is the data really valuable? When it comes to big data, analytics

and AI, the value does not come from collecting the data, or even from deriving some insight from it — value comes from just one thing: action.

Panel 2: Cross-Border Data Flow fundamental to AI growth

Moving on from Panel 1, the second panel identified the need for free-flow of such data to leverage AI growth. Of late, attention has broadened from applications and ethical concerns of AI to rethinking regulations and policy approaches regarding trade, liability, privacy and more importantly, antitrust issues which may plague companies during major takeovers.

Panel 3: Ethical and Legal Challenges around AI Deployment

In the third panel, there were discussions around ethical challenges that have to be discussed and addressed as we progress with the development of AI. How do we roll out AI-based systems that cannot reason about some of the ethical conundrums that human decision-makers need to weigh – issues such as the value of a life and ending deep-seated biases against under-privileged groups? Some even propose halting the rollout of AI before we have answered these tough questions. If AI is recognized as a person under the Indian Law, then how it will fall within the existing ambit of laws such as intellectual property laws (Copyrights, Patents, Industrial Designs etc.), civil and criminal laws and taxation laws. Established principles of contract and negligence can promise a specific outcome or assume a certain duty of care over others but they are ill-equipped to meet the challenges posed by the artificial intelligence industry.

Panel 4: Policy Framework to Facilitate AI's Success - Restrictive Vs. Expansive

Policy planning in AI must be aimed at creating an ecosystem that is supportive of research, innovation and commercialisation of applications. Two key areas which can help AI contribute to India's economy is:

- Setting up digital data banks and exchanges to stream-in information from across industries together with revision of secondary school and university curricula to inculcate interest in AI will help create enabling environment for AI-led growth.
- Setting up centres of excellence supporting interdisciplinary research across law, medicine, engineering, management and the social sciences.

This panel discussion debated which methodology is essential while creating a policy framework around AI and whether the success of AI depends on it being restrictive or expansive.

Speaker Notes

Keynote Session

DG NIC

- AI refers to machine able to do cognitive tasks. Make machine think, perceive, solve problem.
- To mimic human mind
- AI been in research since 3-4 decades. But its been 5 years since it has really taken off
- Virtual assistance, Drones
- AI not an emerging technology anymore
- Data – core of success to ML and DL
- Cloud computing accessible and affordable
- Availability of processing, networking, algorithms
- AI moved from research labs to IT professionals
- AI driven strategies by countries for social welfare
- Application of AI for good of that country
- NITI Aayog study strategy paper
 - Should be for good for the country
 - Inclusive growth of our country
 - Sectors like Healthcare, Agriculture, Smart Cities, Smart Mobility
- Healthcare
 - Challenges - Access to healthcare and access to quality healthcare
 - Problem is not that these facilities are not in these areas, problem is that doctors don't want to go to these areas. Robotic Heart surgery
 - AI health doctors to better diagnostics.
 - Early diabetic detection.
 - AI for Retina error detection
- Agriculture
 - Soil health card is one source of data
 - Give assistance to farmers at the right time
 - Supply chain not going to farmers
 - Insurance claims and compensation
 - Technology based detections
- Education
 - Country have a strong ICT infrastructure today
 - Everyone has mobile
 - Data is available
 - Content in vernacular language should be available for AI
 - Good quality education

- Smart Cities
 - Solving infrastructure problem
 - Cost of housing, pollution, traffic jams
 - Socio-economic factors make it difficult to find solution
 - Mobility platforms...
 - Can we do something innovative in AI
 - Traffic management through AI
 - Work from home is also some kind of innovation to solve problem
- Lot of startups are working on this problem. But they are largely pilots and POCs
- AI should not just be a privilege to the elite, it should be inclusive
- Key factor to drive india:
 - 1. Data
 - 2. Use of Data
 - 3. How do we take consent.
 - 4. Quality
 - 5. Capacity. Skill building. Who would build solutions. Bring it from school level. In AI, you need other disciplines along with Computer Science.
- 6. Dialect Adoption/ Application oriented research // AI for core challenging problems
- Privacy and ethics factors
- Accountability factors. Well tested AI algorithm
- Need to have some kind of bill/act/responsibility/privacy framework around AI
- AI can create social disruption, but also social development
- AI for social good and inclusive growth.

Kalikesh Singh Deo

- In Parliaments and government, data is existing but the use of it wasn't there.
- In last few years, data
- Govt collected huge amount of data
- Lack of focus, resources and capacity
- to process and use it meaningfully
- Big data processing can easily done through AI
- Agriculture
 - PM Fasal Bima Yojana in Bolangir
 - 25,000 farmers – premium returned after one year.
 - Forms were incomplete
 - Central ministry didn't have capacity to analyze the data from the farmers.
- Govt's
- Aadhaar
 - We tend to go overboard. Privacy issue comes out
- Tracking bank accounts, telephones,
- So much disruption happening around, govt difficult to adopt these. We tend to go overboard

- AI is here to stay.
- We can try and monitor Whatsapp and Facebook, but we are powerless to some extent
- Let's put principles on them, rather than a larger constricting regulation or laws
- Jobs
 - Especially in our economy. Lot of unskilled labour
 - AI is also an opportunity.
 - Engineering graduates can develop new spheres, which in turn create new jobs
- Moving Forward
 - Do we understand data privacy, cross border data flow
 - Servers in India
 - New relationship and equilibriums needed
 - Briefing parliamentarians about this situation

Panel 1

Meenu Chandra

- Value is not only monetary value

Dr. Avik Sarkar

- Data is one of the core components of AI innovation
- NITI strategic paper
- Aspect of research
- Institutional framework happening
- Collaboration with industry happening
- Huge lack of data in India
- Datasets available – Textual data, NLP in local languages
- Images dataset publically available
- Speech dataset – speech to text
- The datasets pushed by universities in US
 - Not only making it available, but do annotations
 - Data pre-processing
- Imagenet dataset
 - Hand tagged
 - Marking polygons
- Need dataset in Indian scenario
 - Images for indian face recognition
 - Indic languages - Alexa, Google Home a challenge in India languages
 - Can be targeted in Indian languages
 - Chatbot and voice based systems

- Newspapers in regional languages -> copyrighted materials can't be used for research purposes.
 - Different typeset
 - lack of standardization
- Developing APIs on Indian language
 - Voice to text etc
- Anand Bazaar in Kolkata has made this available
- All India Radio data's (written transcripts)
- Extract data and making them available for public good
- Asking data from Govt really difficult.
- Use data for public data

Mr. Apar Gupta

- About Internet freedom
- Innovate is not equal to invent
- Deployment of AI based applications and intelligence
- Transparency – data that do not identify citizens on granular level
- Liberty
- Punjab Police predictive policing
- Telangana police deployment based on AI
- Personal data – problematic on ground. Data is biased
- Data that is used for these prescriptive algorithms:
 - Data needs to be checked
 - Inherent biases need to be verified
- Need for compromise and deliberation
- Natural resource is people, not data. Data is the new oil. We need to be incharge.
- Data protection standard, experimental data deployment
- Provisions are there EU GDPR
- Even Silicon Valley has started looking at it
- I am a great believer in technology, AI is tech forward, principle of constitutionalism, doors would be opened on the basis of digital credential

Gunja Kapoor

- Data is not the new oil, data is infinite oil is finite.
- Amount of data we feed in, machine is able to make better decisions
- Inherent dichotomy – how much data should we give.
- Is data required for innovation? Yes
- Data is impeded by lack of data? No. MS did not have much data when they built their OS. SRS
- We've become so used to avail services for free... allowed machines to become intelligent
- Op Ed NIE – Chief Ethics Officer..

- Data Protection Bill
 - 1. Intl Trade agreements risk
 - 2. MLATs – data breach // Track 1 Diplomacy

Gaurav Gandhi

- Monetize our privacy
- Data
 - 1. Training data
 - datasets required. May or may not required from cross border
 - May be country specific
 - Data would create more exciting opportunities, than threats
 - India's SDG
 - AI only hope to reach those goals
 - Rather than taking a protectionist role, we should innovate

Panel 2

Pritika

- Cross-Border data flow good for public
- Anonymized data flow is not restricted in the Bill

Amol

- Consumers are aware about the control on their data and AI
- Targeted predictions
- Cross border transaction
 - AI empower and protect when cross border transaction happens
- Consumer powering AI – grievance redressal, data is used responsibly, fix accountability

Rahul

- Changing nature of services
- Storage of data equates jurisdiction
- Consent – cross border data
- Distribution of data
 - Need cross border data flow
- Enhancement of user experience through CBDF
- Nature of internet allows us access to CBDF

Kazim

- Localization vs Cross border data flow – are not mutually exclusive
- Why cross border data flow?
- How much data for AI?
- Need access to data to drive AI.
- AI gathers info, learns, makes prescription and solve a problem.
- Better Accuracy with more data and hence cross border data
- Borderless world

Bishakha

- Assistive platform, not replace humans
- AI going rogue discussion
- Learning vs what you learn from
- Checks and balances to process AI related solution
 - Respond to questions, biases
- Checking performance, bias, testing bias
- Cross border
 - Could be personal, not personal
 - Tremendous computing powers.
 - Deliberate why there is a need to add borders

Panel 3

Arya

- Paradoxical situation
- Need to analyze the legal and ethical specs with an open mind
- Code of ethics, not laws

Aaron

- Customer facing applications and AI on the other side. And if there's a breach
- Smart contracts, contracts drawn by AI
- Legal person under law – Citizen, Organization and AI
- AI entity
 - Communication, goal driven, creativeness...
- AI entity can't be considered under law
- Responsibility and judgement also need to be there to consider it as an entity under law
- Intent – liability. Can we enforce liability on AI
- Humans vs AI

Anirudh

- Algorithmic bias is present
- Indian law doesn't create a safe harbour envisaging AI
- Drones – remote sensing activity, how can I take consent from the people on ground
- Data minimization and storage

Atul

- How do we understand AI?
- Ethics as 0 or 1.
 - Jumping a red light
- Ethics as a person's call
- AI is not a living person, don't treat them like one

Naman

- Technology is a Value neutral paradigm
- Provide value to value neutral
- And once value is given, human rights
- Data protection/privacy/minimization
- Your rights are the rope to bungee jumping
- Over regulation and lack of regulation – equally bad
 - Ex, doT com bubble, 2008 crash
- AI is a paradigm of correlation and not causation
- Pattern Recognition – A and B correlated
 - Objective criterion
- AI doesn't create bias, it only propagates it
- Break silos – Engineers and Civil Societies

Pranav

- Everything automates is not AI
- If leadership doesn't mitigate bias from the data source, then it would creep into the AI
- Need diversity in data

Prasanna

- Problem of Data voyeurism
- Limited liability of AIs

Panel 4

Adnan Ansari

Saikat

- Ranking countries on AI
- Iraq – JSOC
- The emperor of manities by Siddharth!
- Cancer and Anti-insurgent relation - AI
- What is AI being used for?
- Dignity to labour -> Quality
 - Dignity to data -> better AI

Venkatesh

- IP generation on IoT
- NITI paper good start
- AI for public good is a good strategy, and not to become an AI superpower
- Manufacturing and Farming
 - Farming
 - Amount of data (use of elec and water) is not up to mark
 - Satellites to monitor growth of crops
 - Manufacturing
 - Jobs for the future.
 - Reskilling, upskilling

Anulekha

- Explainability factor of AI
- Input the concerns that arises from different stakeholders before creating a data protection framework for AI
- Rights based framework

Dhwani

- AI policy is still in development
- Should be contextual industry policies
- Intended use of technology, and then formulate policies
- FDA in US
 - AI devices for Computer Aided Diagnosis
- In each industry, tech and policymakers should
- In short term, AI would lead to job creation than job destruction
- Healthcare
 - AI will derive insights that humans can't
- Job loss in long run is speculative
- Skilling
 - Maths, Computer Science and Logical Aptitude
 - How to assess students on this?

Dr. Narendra Jadhav

- CBDF
 - Not bounded
 - Increase 45 times b/w 2004-14
 - US 2.8\$ trillion in GDP in 2014
 - Development of Industry 4.0
 - Integration of digital ecosystems
 - Loss of jobs
 - 69% of jobs are likely to be replaced by automation
 - Cloud computing and analytics has led to an increase digitization in organizations
 - For better understanding customer services
- Potential for AI
 - Healthcare
 - Education
 - Smart classroom and online -> increasing access to education
 - Agriculture
 - Better logistics
- Way forward
 - Trade agreements
 - Privacy and security
 - Anonymization
 - Collaborative effort
 - Skilling, reskilling and capacity building
 - Private sector + industry