



# **Blockchain Secured Digital Certificates**





### Education

- Degrees
- Transcripts
- Thesis
- Research



### Banking

- Documents
- Smart Contracts
- De-Fi
- Currency



### Government

- Social IDs
- Tax IDs
- Land records
- Driving License
- Concession Cards



### Healthcare

- Clinical trials
- Research Progress tracking
- Prescriptions
- Lab reports



### Workforce

- Employment Certificates
- Offer Letters
- Appraisals
- Rewards and Recognition



# Blockchain is already here

timesofindia.indiatimes.com/city/kanpur/pm-modi-launches-blockchain-based-digital-degrees-at-iit-kanpur-convocation/articleshow/88540264.cms

THE TIMES OF INDIA

City Kanpur Mumbai Delhi Bengaluru Hyderabad Kolkata Chennai Agra Agartala Ahmedabad Ajmer Allahabad ...

PHOTOS WEATHER POLLUTION NEWS UP ELECTIONS

NEWS / CITY NEWS / KANPUR NEWS / PM Narendra Modi Launches Blockchain-Based Digital Degrees At IIT Kanpur Convocation

## PM Narendra Modi launches blockchain-based digital degrees at IIT Kanpur convocation

TIMESOFINDIA.COM / Updated: Dec 28, 2021, 16:53 IST

f t in e y

ARTICLES

- PM Narendra Modi launches blockchain-based digital degrees a...
- Greentech felicitates Kanpur Metro for environ protection
- Kanpur metro completes one month of ridership
- Madhya Pradesh police bust gang of serial fake bomb planters; 1...



KANPUR: Prime Minister Narendra Modi on Tuesday launched blockchain-based digital degrees at the Indian Institute of Technology (IIT) Kanpur.

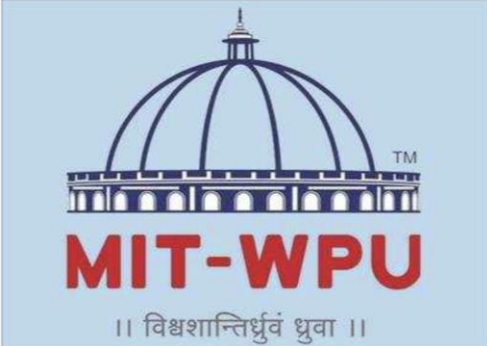
timesofindia.indiatimes.com/home/education/news/mit-wpu-to-offer-blockchain-anchored-digital-degrees

Education News Jobs Board Exams Entrance Exams Exams Result News Admission News CBSE CBSE 12th

## MIT-WPU to offer Blockchain-anchored digital degrees

IANS | Mar 7, 2021, 16:51 IST

✉ 🖨 A- A+



Representative Image.

PUNE: The MIT World Peace University (MIT-WPU) announced that it has become the first in India to offer Blockchain-anchored digital degrees and diplomas to its students.

MIT-WPU has signed a partnership agreement with CertOnce to implement its platform to offer Blockchain-anchored digital degrees and diplomas to over 2,568 students across programs from this year.


HOME NEWS K-12 HIGHER EDUCATION PARENT STUDENT VIDEOS EVENTS COMMUNITY

# StartUp-&-Entrepreneur # Hospitality-Industry # Smartcities # Technology-Leaders # Advertising-&-Event-Industry

## Blockchain-secured Graduation Certificates Launched At NIT Kurukshetra

At the launch, the digital copies of the certificates were sent to all the students via email

WhatsApp Facebook Twitter LinkedIn Email



The President of India, Droupadi Murmu launched blockchain-secured graduation degrees in Haryana at the National Institute of Technology (NIT), Kurukshetra, on 29 November 2022. The guests of honour at the ceremony were Manohar Lal, Chief Minister of Haryana and Bandaru Dattatraya, Governor of Haryana. The convocation degrees were awarded to two consecutive batches of 2020 and 2021 whose convocation ceremony was deferred due to the Covid-19 pandemic.

The technology for awarding blockchain-secured certificates for the students has been provided by CertOnce, a firm offering blockchain-based solutions.

At the launch, the digital copies of the certificates were sent to all the students via email, published on the blockchain and instantly verifiable on the NIT Kurukshetra website.

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# Leading Adopters of CertOnce



**SP Jain**  
(India)



**NIT**  
(Kurukshetra)



**Galgotias**  
University



**LJ University**  
(India)



**LeadWomen**  
(Malaysia)



**Enhelion**  
(India)



**CHARUSAT**  
(India)



**360DigiTMG**  
(Malaysia, India)



**New Delhi Instt of**  
Mgmt (India)



**Pixeltrack**  
(India)



**Centurian**  
University



**LENAPE**  
(US)





# Fake Certificates is a REAL issue



INDIAN  
NATIONAL  
BAR  
ASSOCIATION

Home About INBA Membership Events INI

## Indian Bar Council Reveals That 30% Of All Lawyers In The Country Are Fake

30% of Indian Lawyers are Fake  
Indian Bar Council Reveals That 30% Of All Lawyers In The Country Are Fake

In a shocking revelation, Bar Council of India (BCI) chairman Manan Kumar Mishra has said 30% of all lawyers in India are fake, holding fraudulent law degrees. Speaking at Lawyers Meet-2015, organised by BCI in Chennai on Saturday, Mishra said the council, which is statutorily empowered to discipline errant lawyers and take action



## MIT Admissions Dean Resigns After Fake Degrees Come to Light

Diplomas from three schools were fabricated, school officials say

By Zachary M. Seward, Crimson Staff Writer

April 26, 2007



## big-shots who lied on their resumes

Published: Sept 20, 2014 7:32 a.m. ET



By  
PRIYA  
ANAND



David Tovar

Wal-Mart's top spokesman has resigned over a two-decade-old resume lie. Dan Tovar claimed he had a bachelor's degree from the University of Delaware, where in fact he never finished the required coursework to get a diploma. Bloomberg reported this week; the FBI was exposed during a background check while Tovar was being considered for a promotion.

Tovar's case is part of a long tradition: His is just the latest in a string of high-profile cases in which prominent figures in business and education got caught in an embarrassing resume lie -- often years later. The background check company



# 3 Marketing Problems Online Programs

**#1**

**Paid Digital Marketing is too expensive**

**#2**

**Partnership Model causes a big dent in profitability**

**#3**

**Content Marketing is too slow to yield results and too crowded**

**\$3 Mn**

Av. spend on Social Media Ads in Google, FB, Insta etc

**40%**

Av. revenue shared with admission partners

**99%**

content marketers don't reach on first page in organic search

\*Average per annum for a mid sized university



# Solution

**Blockchain Verifiable  
Digital Certificates**

**Tamper  
Proof**

**Instantly  
Verifiable**

**Globally  
Accepted**



# Sample Certificates

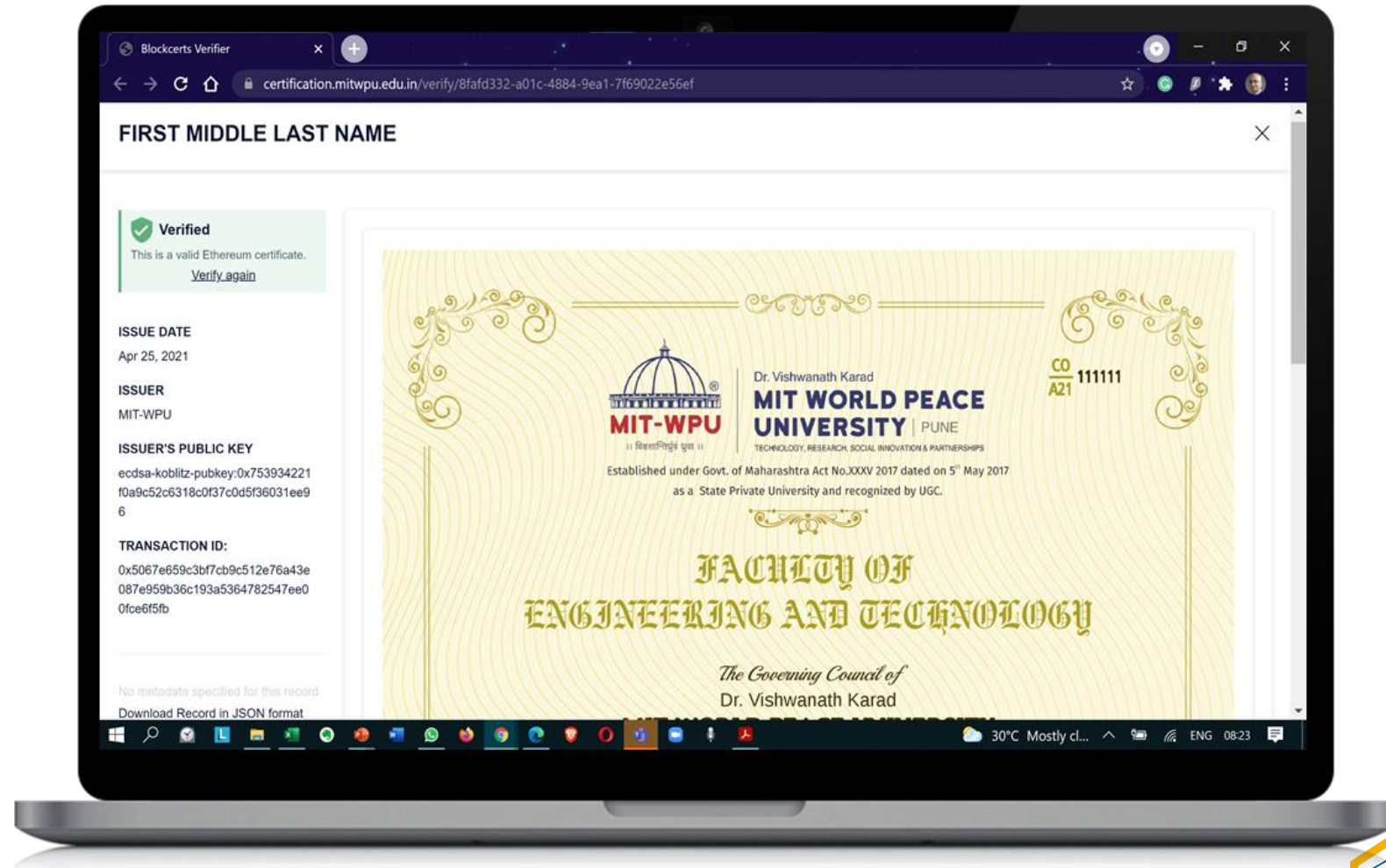
- Offered both in print and digital version
- **Digital PDF** – With Verification Link
- **Printed Certificate** – With QR Code
- Customizable Designs as per the University current template
- Verification on Blockchain
- Sharing on social Media





# Instant Online Verification

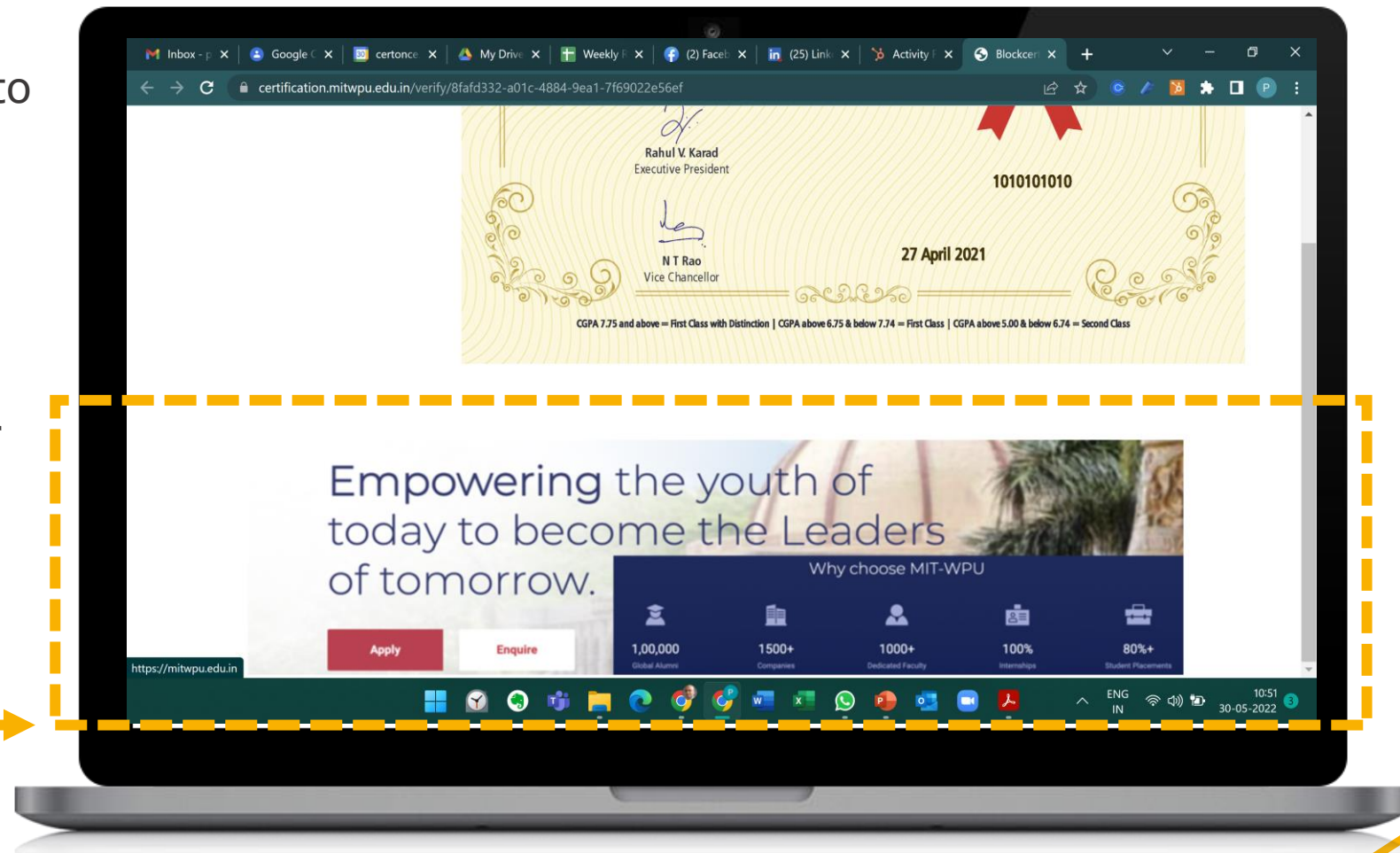
- See verified copy of the certificate online on the website of Issuing University.
- Verification within seconds with Click on digital PDF or scan of QR Code on the printed version.
- See Issue Date, Issuer Name, Public key, Blockchain Transaction ID
- Green Tick confirms it as valid Ethereum Blockchain Certificate



# Institute Banner for Marketing

- Turning every Certificate into a branding and marketing tool
- Capture every visitor
- Generate organic traffic on Institute Website
- Dynamically change banner and landing page with type of certificate being verified

This will be  
University Banner



# Design Elements and Benefits

Click logo to verify on Blockchain



6 x 11.68 in

Add to **LinkedIn** Profile



Learn From The  
Top 1% Live

CLICK HERE  
TO LEARN MORE

Directly shows the  
Blockchain published  
copy on Issuer website

- **Builds Trust** on Brand due to instant verifiability on Blockchain
- **Organic Traffic** to Website
- **Convert Traffic to Customer** Issuer using CTA based banners on Verification page

Learner clicks to directly  
add to profile on  
LinkedIn

- **Increased Brand Reputation** with every view of the learner profile
- **Aspirational Value** for profile visitor
- Clicking the profile brings **Organic Traffic** to issuer website

Click to Directly Share  
on Social Media

- Turning Learner to **Brand Ambassador**
- Every click on social media leads to Verified Copy on Issuer Portal bringing **Organic Traffic**
- **Spear Fishing the Target Audience**

Company ad banner on  
Verification Page

- **360 degree marketing strategy**
- **Every click on any social media share of certificate leads to verified copy**
- **Every visitor converts to organic traffic for Brand Promotion**



# NFTs – The next Buzz



- **Issue to Meritorious Students**
- **Preserved Forever**
- **Alumni Connect**
  - Hedonic Value
  - Memorabilia
  - Marketing Value





# Features of Blockchain Secured Degrees

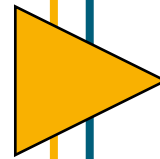
<b>Easily Shareable</b>	One click share on Social media e.g. Linkedin, Facebook, Instagram, twitter giving <b>tremendous opportunity and social media recall to the Institute brand</b>
<b>Instantly Verifiable</b>	One-click verification from the certificate PDF directly, by displaying Blockchain Secured Tamperproof copy of the certificate on the verification page of the institute website. <a href="http://www.institutename.edu/verify">www.institutename.edu/verify</a> or <a href="http://credentials.institutename.edu">credentials.institutename.edu</a>
<b>Tamper Proof</b>	One-way, deterministic cryptographic SHA26 hash created by the document is committed on Blockchain making it time stamped and its content tamperproof.
<b>Learner Owned</b>	Learner controlled process from authorization of issuance, choice of storage in local mobile app or cloud vault ensuring content privacy and recipient-managed sharing
<b>Vendor Independent</b>	Verifiable independent of and in addition to its vendor OR issuer on any of open standard compliant platform <a href="http://www.certonce.com">www.certonce.com</a> , <a href="http://www.blocekrts.org">www.blocekrts.org</a> , <a href="http://credentials.cenacademy.vn">credentials.cenacademy.vn</a>
<b>Intrinsically Trustworthy</b>	Architected to ensure that issuer and recipient identities, contents of document, validity & time stamp remain immutable forever
<b>Revocable</b>	In case of any discrepancy discovered post issuance, the certificate can be revoked or reissued later at any time by the issuer.
<b>Open Standards based</b>	Based on MIT incubated open standards reference architecture & open-source Blockcerts platform. Aligned with the following standards: IMS Open Badges, W3C Verifiable Claims, W3C Linked Data Signatures to ensure interoperability across wide range of organizations



# How it helps Institute?

## Feature

1. Tamper Proof certificates
2. Instant Verification on Blockchain
3. One-click Shareable on Social Media
4. One-click add to LinkedIn profile
5. Revocable
6. Time Stamped



## Benefit

1. No Fake Certificates
2. Trust
3. Faster Employment
4. Brand Marketing for Institute
5. Revocability useful feature for validity based certificate that require renewal
6. Forever Verifiable



# Benefits to all stakeholders

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## Institution Marketing benefits

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Targeted Digital Marketing to potential customers through LinkedIn  
Leveraging Network Effect when learners share their completion certificates  
Industry Recall when employers see Blockchain secured verifiable certificates

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## Cost Benefits

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Saving through automation of verification process  
Saving on student records management

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## Learners Faster Employability

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Due to trust and instantly verifiability

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## Profile Building

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Through sharable Digital Credentials

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## Verifiers Reduce verification cycle

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Instant online verifications in seconds instead of weeks  
Eliminating opportunity cost of wrong hires

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## Build Trust on Institute

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And stronger relation through brand recall.

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# Deployment Architecture

Certificate  
Generation Server



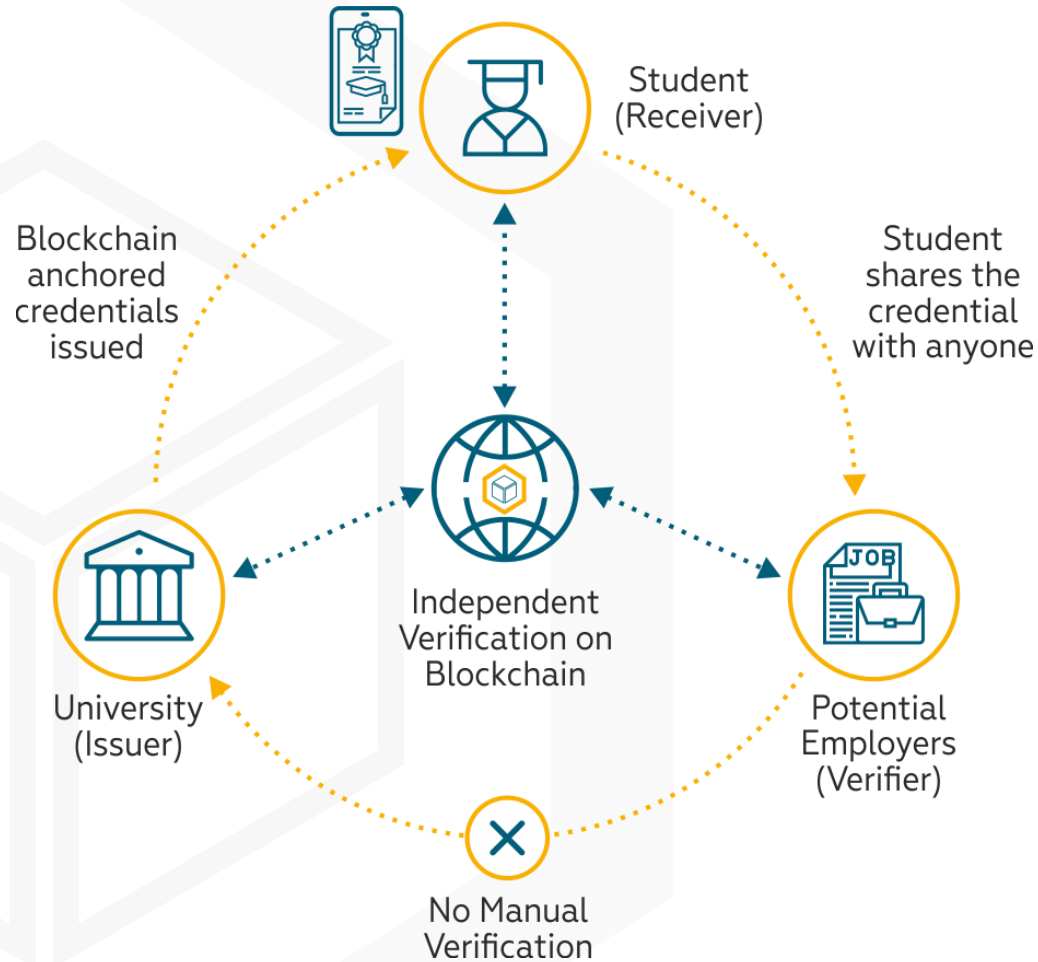
CERTONCE

Certificate  
Verification Portal





# Certificate Flow on Blockchain



**The complete process flow from Issuance to Verification involves the three stake holders at various stages**

- Issuer
- Receiver (Student)
- Verifier (Employer/Verification agency)

## Key points of the solution

- The process of issuance is a one-time activity on account of the issuer.
- Student holds the Credential in her/his respective open source wallet as well as personal storage.
- Student has a complete control on the sharing of the credentials with anyone in future any number of times.
- Verification process is initiated by verifier upon receiving the credentials from the student and can be done any number of times.



# The New Global Standard



**Massachusetts  
Institute of  
Technology**

Boston, USA



Canada

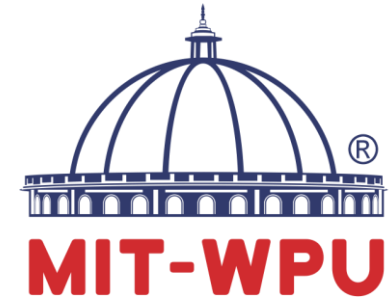


University of Baharin



THE UNIVERSITY OF  
**MELBOURNE**

Australia



MIT World Peace  
University PUNE





**What's under the Hood?**



# Core Technology Roadmap



## Blockcerts

**MIT Incubated**  
Open Standards  
Adopted by MIT, U  
Melbourne, U Bahrain,  
SNMU, SPJain



## Digital Credentials Consortium

**Further evolution**  
12 Founding Members  
Harvard, MIT, UC  
(Irvine), UC (Berkley),  
Georgia Tech, U  
Toronto, Delft and  
more



## W3C Verifiable Credentials

**Global Standard**  
Evolved further to  
extend to Human to  
Human, Human to  
Machine, Machine to  
Machine Credentials  
exchange





# Technology Stack

## SELF VERIFIABLE CREDENTIAL

**Patented**

Automated one click verification  
No database exposure



## PKI

Time tested technology  
Identity locking and verification



## BLOCKCHAIN

Immutability  
Time stamped



## BLOCKCERTS W3C : Verifiable Credentials

MIT Incubated and adapted  
Open standard  
Independent verification



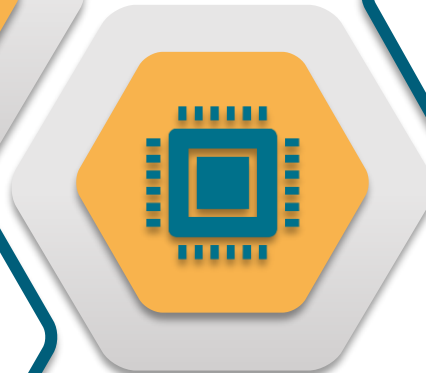
## OPEN BADGES

Interoperability  
Global standards



## CRYPTOGRAPHY

NSA designed SHA 256 algorithm  
One-way deterministic encryption



## More about

# Self-Verifiable Credential

*patented technology by CertOnce*

## Unique process to create and verify Digital Credential

- Automated process of verification on blockchain = **Zero** Learning curve for verifier
- Verifiable on opensource platform
- No need maintain student database online – **EVER**



# How is Blockchain Secure



University



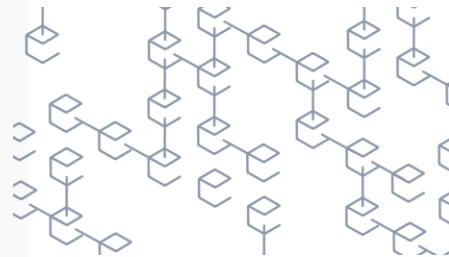
Traditional Single Database on  
premise or cloud



Prone to hacking, data theft,  
manipulation, crash



Reputation Risk



Decentralized Distributed  
Public Ledger of Blockchain



Tamper proof, time stamped,  
Immutable,



# DigiLocker isn't enough



Shareable globally	No (only in India)	Yes. (Global Standard)
Accessible outside India	No	Yes
Verification time	1-4 weeks	5 seconds
Tamperproof	No	Yes
Verification through Mail	No	Yes
Verification Monetization	No	Yes
Adopted by verifiers	No	Yes
Alumni record management	No	Yes
Customizable Templates	No	Yes
Brand Building	No	Yes





# Key Points



- Global Standard (MIT Boston, DCC, W3C.org)
- No More Fake Certificates
- Monetizing the Verification Revenue
- Lead Generation via Organic Traffic
- Brand Positioning as Technology Thought Leader



# Mission

LET'S GET STARTED.

To Bring  
***Verifiable Trust***  
in every  
Digital Document





*Thank You*

