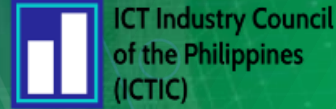




SILICON VALLEY HQ



# International Certifications / Specialized Skills for Employment

- in Academe, Industry, and Government

**Mr. Dennis Franco M. Layug,**

**MBA, CFMP, CAEA, CATA, RMA, CDMP, CAIP, CISDP, CCSA, CDSA, CCA, CISDP**

President & CEO of East West International Educational Specialists Inc.

President & CEO of Kaizen Holdings International, Inc.

Board Director of ICT Industry Council of the Philippines

Alumni Director of Asian Institute of Digital Transformation



# Global Hiring Preferences

“Industry microcredentials are emerging as the latest hiring preference for many employers across the world as they begin leaning into skills-based hiring.”

– Human Resources Director (2023)



# What are microcredentials?

“Microcredential is a targeted, specific, focused skill and competency with certification and/or digital badge having been mentored, taught and coached by industry experts through synchronous and asynchronous modalities for career advancement, life-long learning, upskilling, retooling, reskilling, and continuous professional development.”

- Dennis Franco M. Layug

“Microcredentials are bite-sized courses on specific skills and competencies that allow individuals to gain the qualifications needed by the industry. Microcredentials bridge the gap between what the academe provides and what the industry needs.”

- Sun Star Davao Digital, 2023

Has stand-alone value and may also contribute to or complement other microcredentials or macro-credentials, including through recognition of prior learning; and standards required by relevant quality assurance. - UNESCO (Downes,2021)

“Microcredentials: Competency-based recognition showcasing mastery in a field. Earned after focused training and assessments, recognized across industries.” - Manila Bulletin by Mon Ibrahim

# Exponential Technologies That Catapulted Demand for microcredentials

**Cybersecurity**  
**Metaverse**  
**NFT**  
**Cryptocurrency**  
**Blockchain**  
**Internet of Things (IoT)**

**Artificial Intelligence**  
**Generative AI**  
**Machine Learning / Deep Learning**  
**Automation and Robotics**  
**Cloud Computing**  
**Advanced Analytics**  
**Virtual Reality**  
**Augmented Reality**  
**Extended Reality**  
**Quantum Computing**  
**Drones**

**Autonomous Vehicles**  
**Advanced Renewable Energy**  
**Nanotechnology**  
**3D Printing**  
**Biotechnology**



# Exponential technologies

## Homomorphic Encryption

- Collaborative computing without revealing secret data.

## 3D Multi-Sensor Transmitters

- Synthesizes sensory experiences for environmental impact.

## Robotics

- Maturing tech to benefit industries, starting with agriculture.

## IoT, 5G And Edge Computing

- Untapped potential for deep insights with the right infrastructure.

## At-Home Digital Diagnostics

- Innovations expanding telehealth for real-time diagnostics.

## Conversational AI

- Potential for seamless human-like interactions in everyday tasks.

## Augmented Reality

- Warehouse guidance, product selection, and packing enhancements

## Rapid Virus Testing

- Anticipated move to home-based rapid virus testing for improved pandemic management.

## Quantum Computing

- Moving from science fiction to practical contributions in various fields.

## Passwordless Authentication

- The demise of traditional passwords, ushering in advanced authentication methods.

## AR/VR In Real Estate And Construction

- Changing the game by previewing changes before investments.

## Always-On Connectivity

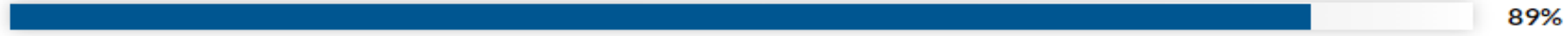
- Reliable, constant connectivity, akin to always available oxygen.

## Nanotechnology

# Top 10 Technologies Being Adopted by Companies



Big data analytics



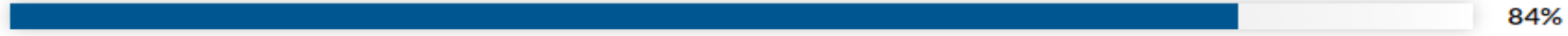
IoT and connected devices



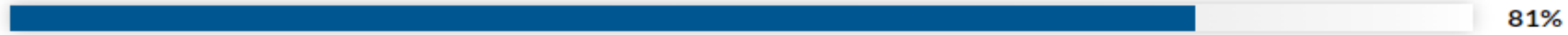
Encryption and cybersecurity



Cloud computing



Ecommerce and digital trade



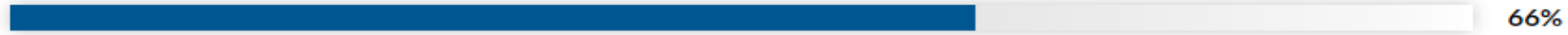
Text, image, and voice procesing



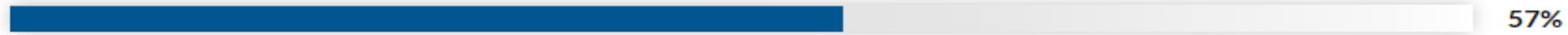
Artificial intelligence



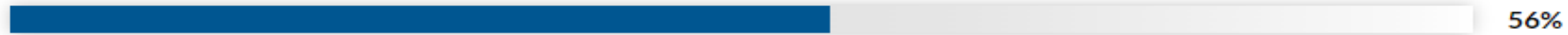
Power storage and generation



Augmented and virtual reality



Distributed ledger technology (blockchain, etc.)



# Due to the Global Shift...

- Functions are being replaced by automation.
- Google, Meta, Amazon and other tech companies have laid off more than 104,000 employees in the last years.
- It's even been reported that companies such as Amazon have used AI to identify low-performing staff and fire them.



Country	Basic digital skills	Standard digital skills	Advanced digital skills
<b>Philippines</b>	<b>6%</b>	<b>2%</b>	<b>1%</b>
Brunei Darussalam	57%	40%	28%
Cambodia	29%	3%	0%
Indonesia	49%	25%	4%
Malaysia	60%	42%	11%
Singapore	53%	40%	8%
Thailand	17%	10%	1%
Viet Nam	17%	8%	0%
Global ICT Development Target (2030)	70%	50%	N/A

Improving Digital Skills in the Philippines  
Manila Bulletin 2022





# “61% of workers will require retraining”

– World Economic Forum – The Growth Summit: Jobs and Opportunity for All

- 4 million new retraining technology-enabled roles will be added to the global labor pool in the same time frame.
- A shifting labor market, enabled by digital connectivity, means employers are embracing skills-based hiring and microcredentials to address skilled talent shortages at scale.
- Skills-based learning can provide an equitable and fast-tracked path to new careers for job seekers while expanding and diversifying talent pipelines for employers.





Prompt Engineer



AI Ethicist / Ethics Expert



AI Explainer



AI Auditor



AI Business Strategist



Data Broker



Data Detective



Cybersecurity Analyst



Machine Manager



AI Trainer

New Jobs Created by  
Shifting Landscape



**“Best way to show current and prospective employers what their skills portfolio has is through micro-credentials.”**

Manila Bulletin “The Promise of Microcredentials”

**“The Decline of the Degree and Diploma and the Importance of Skills**  
At the same time, employers are changing their hiring practices. Many, including major employers such as Google, IBM, Apple, EY (UK), Starbucks, Hilton Hotels and Penguin Random House, no longer demand a degree as a basis for employment – they focus instead on the skills portfolio and experience with a potential employee brings to their workplace. The microcredentials and skills training is now the basis for hiring.”

European Commission (2020)



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“Explosion” of micro-credential courses proves lifelong learning vital ...

### Skills and employability

# “Explosion” of micro-credential courses proves lifelong learning vital

Conference re-emphasises lifelong learning is key to upskilling, re-skilling and the economic recovery, while recognizing the need for healthy skills ecosystems and quality education.

Press release | 19 May 2021



### Tools



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**Micro-credentials can stimulate diversity of provision**

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## Microcredentials: A new category of education is rising



Alejandro Caballero, Sean Gallagher, Hanne Shapiro and Holly Zanville 05 July 2022



At the core of the traditional higher education system is a degree. However, over the past decade, enrolment in four-year degree programmes has steadily declined in the United States and, more recently, this trend has spilled over into emerging markets.

Administrators, policymakers and employers began to question if there was a better way to fulfil student and labour market needs.

Meanwhile, a new category of structured education was on the rise, offering smaller learning units with the potential of achieving a faster return on investment. As the pandemic took hold, interest in new learning models and digital offerings boomed.



# “Microcredentials: A new category of education is rising”

- The gap is widening between the type of education offered in traditional higher education institutions and the skills needed to work in today’s digital world. (World Economic Forum)
- In 2013, about 40% of US companies accepted online learning when evaluating job candidates.
- In a 2021 national survey, 71% of employers responded that online credentials were equal to or better than those earned through traditional means.
- It has been estimated that 50% of employees worldwide will need reskilling by 2025 due to digitalisation. (European Commission)



# In Asia & the Philippines

- Some 83 percent of the 4 million Filipino freelancers said they do self-study to upskill themselves through free online courses, the DICT's study revealed. (Inquirer.net, 2023)
- Microcredential courses are highly necessary in Asia due to the growing skills mismatch and detrimental effects on long-term commercial and economic growth (see Ra, Chiin, and Liu, 2015)
- “Explosion” of micro-credential courses proves lifelong learning vital (International Labor Organization, 2021)





“Employers are desperate to bring on people with any level of training, which frequently includes those without a college degree. Instead, those employees often have an array of microcredentials or certificates on their resumes”

- EDTech April 2023



HEADLINES

# More Filipinos beefing up their 'microcredentials'

By: [Tyrone Jasper C. Piad](#) - @inquirerdotnet Philippine Daily Inquirer / 02:24 AM November 19, 2022



 **Naga College Foundation, Inc.**

1 Jun · 🌐

**LEAP INTO THE FUTURE** | On March 15, 2023, Naga College Foundation, Inc. (NCF), through the Institute for Innovation and Continuing Education (I-ICE), entered into a tripartite agreement with the East West International Educational Specialists (East West) and Silicon Valley HQ, Inc. (SVHQ)—setting the bar higher on educational innovation by providing certification programs and micro-credentialing courses to address the need of industries for skills-based and digitally competent workforce.

CEBU NEWS

## UV is first school in Cebu to offer micro-credentialing

[Mitchelle L. Palaubsanon](#) - The Freeman ⓘ

August 29, 2023 | 12:00am

With an aim to have a 100 percent employability among their graduates right after graduation, the university is partnering with East West International Educational Specialist in making this vision a reality.



**Wesleyan University - Philippines**

Is NOW a Certification and Testing Center for:

- Certified Financial Markets Professional (CFMP)
- Certified Advanced Equity Analyst (CAEA)
- Certified Advanced Technical Analyst (CATA)
- Certified Digital Marketing Professional (CDMP)
- Certified Data Science Associate (CDSA)
- Certified Data Science Professional (CDSP)
- Certified Information Security and Data Privacy Practitioner (CISDP)
- Certified Cloud System Analyst (CCSA)
- Certified Artificial Intelligence Professional (CAIP)
- MICROSOFT Office Specialist Certification (MOS)

**Microsoft**  
Office Specialist  
Authorized Testing Center

In Partnership with:



# List of Some Philippine Colleges and Universities Integrating Micro-credentials in the Philippines

ATENEO DE NAGA UNIVERSITY	UNIVERSITY OF THE VISAYAS MAIN
NAGA COLLEGE FOUNDATION	UNIVERSITY OF THE EAST CALOOCAN
ADVENTISTS UNIVERSITY OF THE PHILIPPINES	FAR EASTERN UNIVERSITY DILIMAN
WESLEYAN UNIVERSITY	ATENEO DE MANILA UNIVERSITY
NATIONAL UNIVERSITY BALIUAG	RIZAL TECHNOLOGICAL UNIVERSITY PASIG
BALIUAG UNIVERSITY	UNIVERSITY OF BAGUIO
FATHER SATURNINO URIOS UNIVERSITY	DIVINE WORD COLLEGE CALAPAN
NORTHWESTERN UNIVERSITY	UNIVERSITY OF THE EAST MANILA
UNIVERSITY OF MINDANAO MAIN	RIZAL TECHNOLOGICAL UNIVERSITY MANDALUYONG
UNIVERSITY OF MINDANAO TAGUM	UNIVERSITY OF MINDANAO PANABO
UNIVERSITY OF MINDANAO PENAPLATA	UNIVERSITY OF MINDANAO DIGOS
UNIVERSITY OF MINDANAO BANSALAN	UNIVERSITY OF SOUTHEASTERN PHILIPPINES
PHILIPPINE COLLEGE OF CRIMINOLOGY	UNIVERSITY OF MAKATI
SILLIMAN UNIVERSITY	MAPUA UNIVERSITY



EAST WEST  
INTERNATIONAL EDUCATIONAL  
SPECIALISTS INC.

"It's not a four-year course. It's not a degree. But you can present this to qualify for a job"

– President Bongbong Marcos



“It’s really skills training. We have to upskill everybody. We need to have a system that will work with everyone,”  
– President Bongbong Marcos

During his meeting with members of the Private Sector Advisory Council (PSAC) at Malacañang in November 14, 2022, the President underscored the importance of microcredentials as a vital component for Filipino workers to remain competitive in the workforce.

**Industry  
microcredentials  
appeal to both  
students and  
employers.**

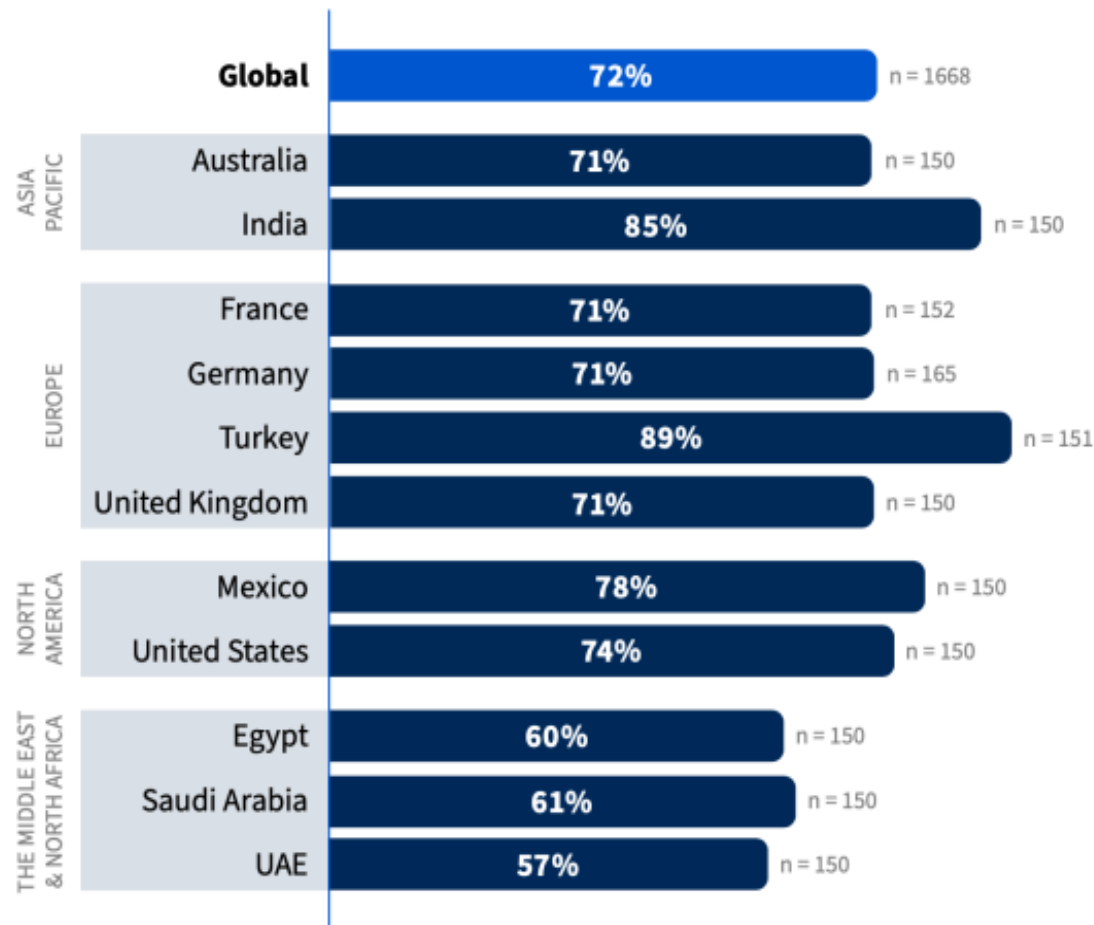


**88% of students** believe a professional certificate **will help them stand out** with employers.



Employers are **76% more likely to hire** a student with a professional certificate, on average.





72% more likely to hire a candidate who has microcredentials.

88% of employers agree or strongly agree that microcredentials strengthens a candidate's application.



“Industry microcredentials help hiring decision-makers solve for their top two challenges: identifying and validating applicants’ skills.”

77% of employers are already using or actively exploring skills-based hiring – and 97% of employers are considering it.



# Benefits of Microcredentials

“Microcredentials are taking off.” – European Union  
Training Foundation 2022

- Immediate relevance to labor market demand
- Support individual learning
- Stand-alone value in qualifications
- Facilitate skills recognition
- Enable flexible training design
- Cost and time-saving





# Impact on Schools

90% of students and recent graduates said including industry microcredentials in an academic program would make them more likely to enroll in that program.

- 81% believe that microcredentials will help them succeed in their job once hired.
- 74% said that the inclusion of relevant microcredentials would influence their choice of a degree program at their university.
- 66% said the credential “counting as credit toward a degree” was their highest motivating factor, while 43% ranked it “being offered by an industry-leading company” at the top.



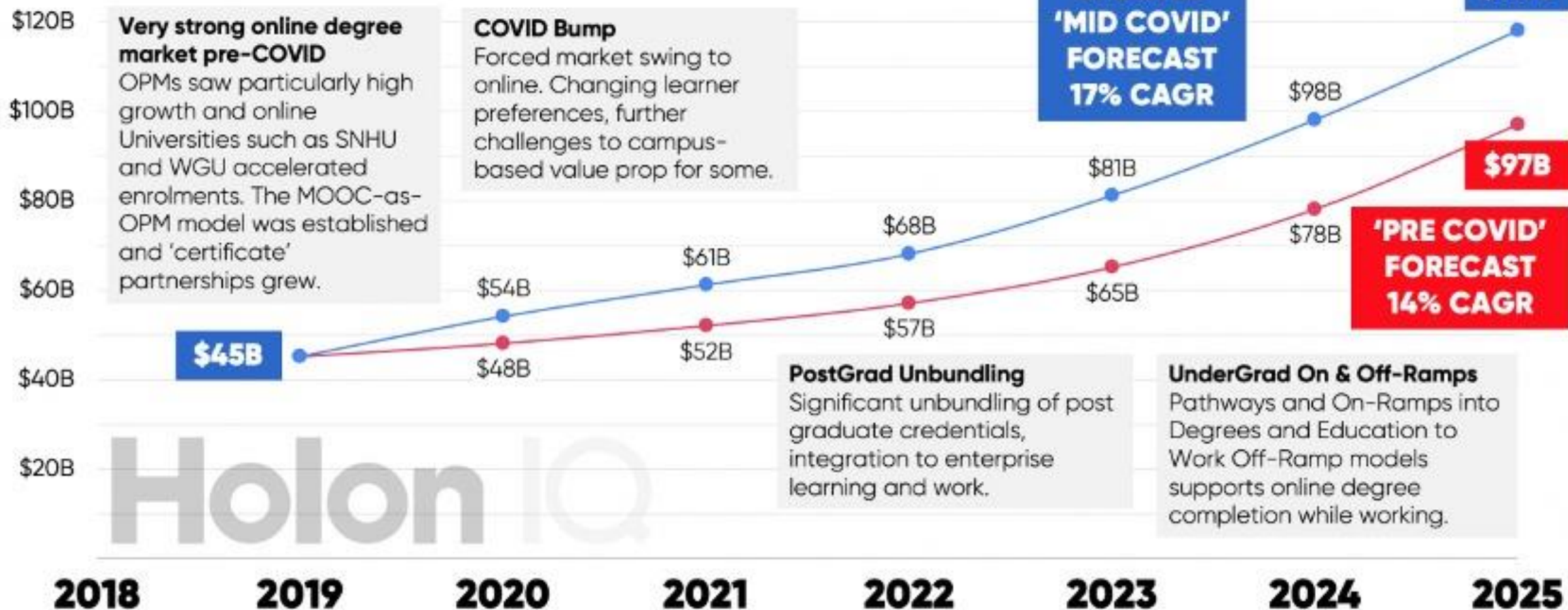
# Role of Educational Institutions in Microcredentials

- ✓ Deliver high-quality microcredential programs aligned with industry needs.
- ✓ Empower students and graduates to have more industry relevant skills and competencies through microcredentials.
- ✓ Collaborate, cooperate, and partner with industries to upskill students and graduates.
- ✓ Promote and disseminate information about microcredential offerings
- ✓ Support faculty development in microcredential
- ✓ Provide opportunities for international and global trainings and internships with microcredentials
- ✓ Embrace and adopt digital transformative programs
- ✓ Become creative in designing curriculum that addresses demands of industries
- ✓ Constantly update the curriculum



# \$117B Online Degree & Micro-Credential Market in 2025

Global Online Degree and Micro-Credential Expenditure Forecast in USD



# Types of Microcredentials in the Philippines

- ✓ Non-credit microcredentials offered by higher education institutions, industry partners, and non-profit organizations
- ✓ Credit-bearing microcredentials that can be integrated into formal degree programs
- ✓ Stackable microcredentials that can be accumulated to earn a higher-level credential





# Examples of Microcredential Programs in the Philippines

- ✓ Data Science for Business
- ✓ Digital Marketing Social Media Management
- ✓ Project Management and Agile Methodologies
- ✓ Cloud Computing and Cybersecurity
- ✓ Artificial Intelligence and Machine Learning
- ✓ Cyber Security
- ✓ Robotics
- ✓ Financial Analytics
- ✓ .....many more



# Certified Executives with Microcredentials



**Jervin S. De Celis,**  
**CFMP, CAEA, CATA, CSR**  
Analyst  
TIMSON Securities Corporation

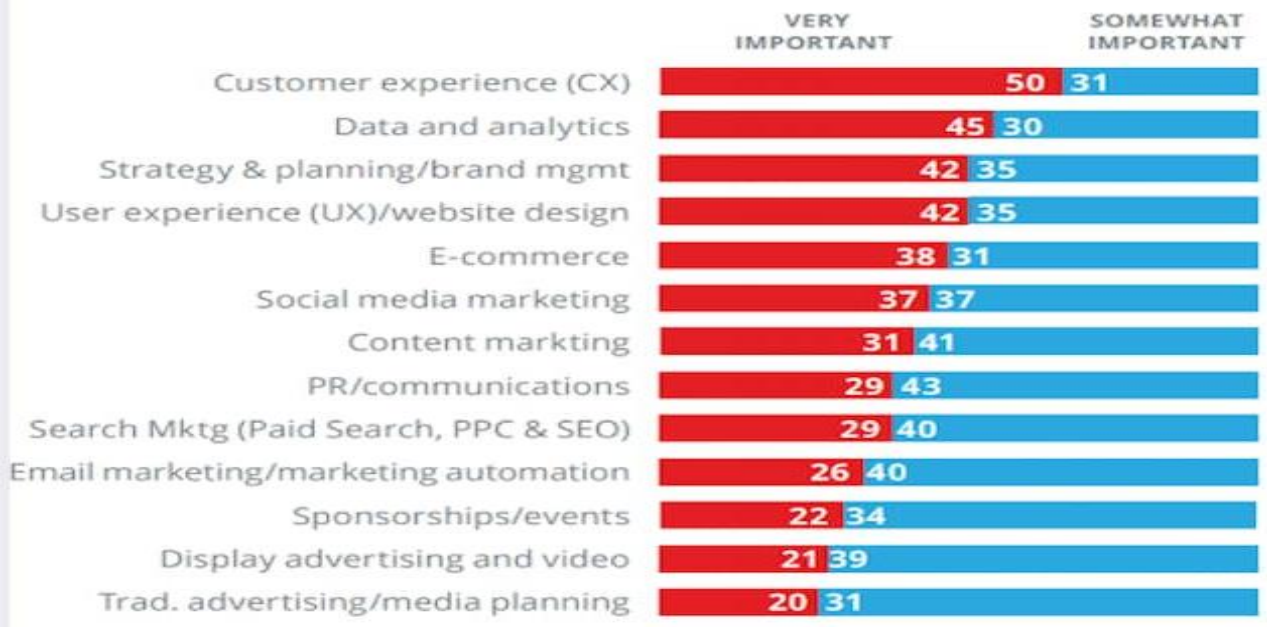


**Henry Aguda, CFMP**  
Chairman | President and CEO  
Union Digital Bank



**Rey Jose "RJ" Bumanglag,**  
**CDMP, CDSA**  
Vice President | Treasurer  
RCBC Leasing and Finance Corporation

**FIGURE 6: KEY DRIVERS OF SUCCESS**



The “Digital Marketing Specialist” role is among the top 10 most in-demand jobs, with approximately 860,000 job openings. While that is just one role within the industry, this type of opportunity is abound for other roles in digital marketing.

- LinkedIn

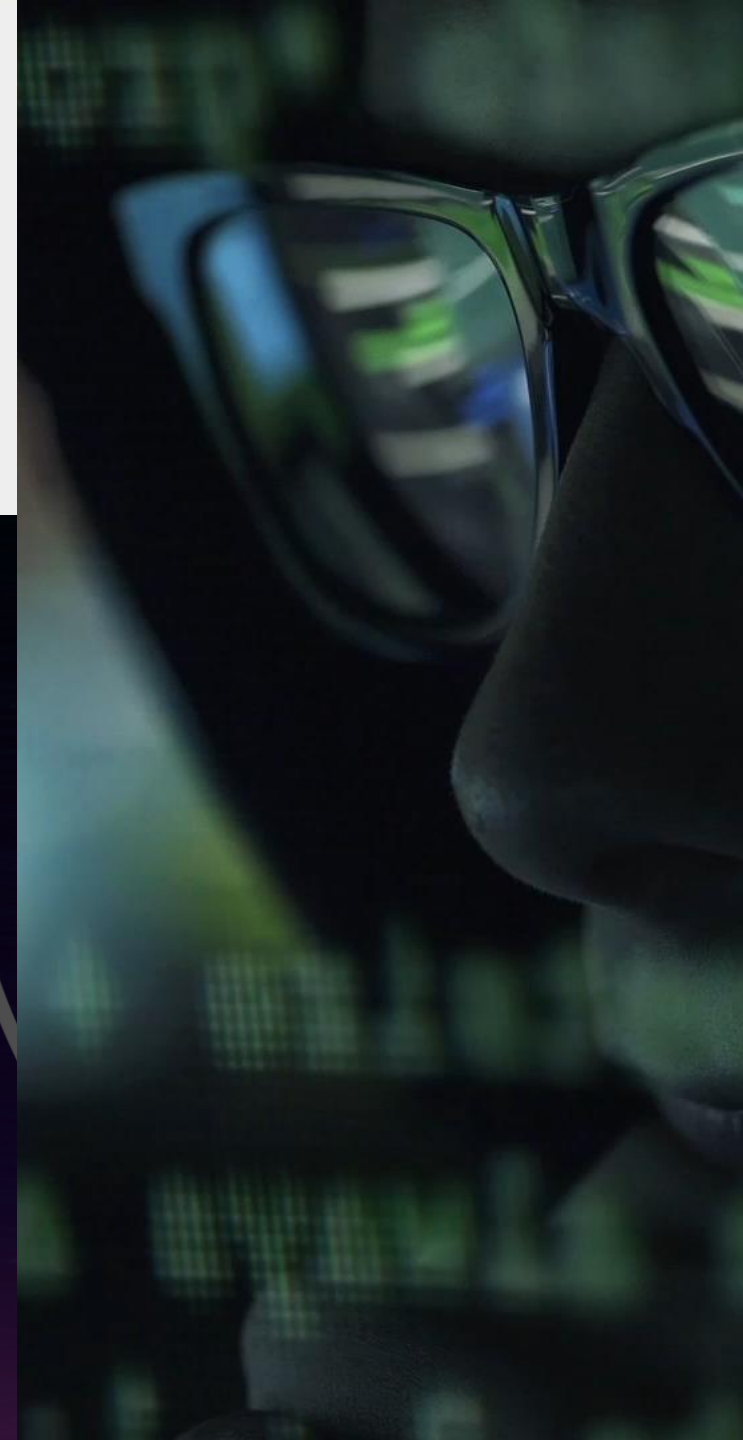


# Demand for cybersecurity jobs on the rise

Ehda M. Dagooc - The Freeman ⓘ

June 8, 2023 | 12:00am

- The cybersecurity workforce has reached an all-time high, with an estimated 4.7 million professionals, but there's still a global shortage of 3.4 million workers in this field, according to the 2022 (ISC) Cybersecurity Workforce Study.
- In the United States alone, there are more than 700,000 unfilled cybersecurity jobs, according to a data from Cybersecurity Ventures.
- Based on ISC study, the median salary for cybersecurity professionals in the US is \$135,000.
- Earlier, DICT Secretary Atty. Ivan Uy said that currently, there are three million job vacancies for cybersecurity experts around the globe. However, while the demand is high for Filipino IT experts, only a few attained the proper training and certification to be employed.





# Cyber Security Roles

## Computer Forensic Analyst

- Recovers and analyzes data for criminal investigations.

## IT Security Specialist

- Develops strategies to protect systems from cyberattacks.

## Security Manager

- Oversees cybersecurity efforts and manages IT teams.

## Security Engineer

- Implements security measures and responds to breaches.

## Security Consultant

- Advises on improving security systems and measures

## Director of Security

- Leads and implements security regulations in large companies.

## Security Administrator

- Manages security solutions and policies.

## Information Security Analyst

- Gathers data and implements security measures.

## Security Specialist

- Monitors and responds to cyber threats.

## Chief Information Officer (CIO)

- Provides leadership, sets security regulations, aligns strategy.

## Network Security Engineer

- Focuses on securing connections and preventing cyberattacks.

## Machine Learning Engineer

- Designs AI algorithms for cybersecurity.

# AI Roles

1. Machine Learning Engineer
2. Data Scientist
3. Business Intelligence Developer
4. Research Scientist
5. Big Data Engineer/Architect
6. Software Engineer
7. Software Architect
8. Data Analyst
9. Robotics Engineer
10. NLP Engineer



# Demand for Scientists for 2023-2024

“The number of data scientist roles is projected to grow 36% between 2021 and 2031, or making it one of the fastest-growing occupations in the U.S. and other parts of the globe.” – Fortune.com

“ There are 2,613 jobs opening as of Nov 20  
○for DATA SCIENTISTS in the Philippines.” -Indeed.com

“ There are 228,015 jobs opening from 2022-2023  
for DATA SCIENTIST globally.” – BLS.gov



# Challenges to be Considered in Microcredentialing

- Government agencies
- Lack or Limited Understanding of microcredentials
- Industry mentors and coaches
- Expanding microcredentials from Basic Education to post graduate level
- Ensuring quality and consistency of microcredential programs
- Addressing the issue of affordability and accessibility of microcredentials
- Raising awareness and promoting the value of microcredentials among learners and employers
- Adoption in Philippine Education system



# How to implement microcredentials

1. Identify specific skills or competencies
2. Clearly define the criteria for earning each microcredential
3. Decide on the format and details of the microcredential (e.g., badge, certificate, digital credential).
4. Leverage Technology: Use generative AI applications, LMS or dedicated platform for issuing and managing microcredentials.
5. Collaborate with Industry Stakeholders ( Employers, industry experts and Educational institutions)
6. Integration with Existing Programs
7. Provide Support and Resources to participants



# Future Directions of Microcredentials in the Philippines



INTEGRATION OF  
MICROCREDENTIALS INTO THE  
FORMAL EDUCATION SYSTEM



EXPANSION OF  
MICROCREDENTIAL OFFERINGS  
ACROSS VARIOUS DISCIPLINES  
AND INDUSTRIES



DEVELOPMENT OF OPEN AND  
FLEXIBLE MICROCREDENTIAL  
PLATFORMS



UTILIZATION OF TECHNOLOGY  
TO ENHANCE  
MICROCREDENTIAL DELIVERY  
AND ASSESSMENT



# Call to Action

## Encourage

Encourage students, graduates and professionals to enhance their skills, knowledge, competencies and employability through microcredentials

## Urge

Urge government agencies and educational institutions to embrace, adopt and implement microcredentials as a valuable tool for lifelong learning

## Call

Call upon government, academe, industry to actively support microcredentials in the Philippines for NATION BUILDING





**GET CERTIFIED WITH  
MICROCREDENTIALS TODAY!**

Visit our website for more details:  
**[eastwestiesi.com](http://eastwestiesi.com)**





# Microcredentials

- Introduction to Python IT Specialist Cybersecurity
- Introduction to Metaverse IT Specialist Databases
- Introduction to Web Design IT Specialist Device Configuration and Management
- Certificate in Professional Business
- Communication-Australia
- IT Specialist HTML and CSS
- Certificate in Advanced Quantitative Data
- Analysis- Australia
- IT Specialist HTML5 Application Development
- Certificate in Organizational Human
- Management-Australia
- IT Specialist in Java
- IT Specialist Network Security IT Specialist in JavaScript
- IT Specialist in Advanced Python IT Specialist Networking
- Coding programs for Basic Education (Grade 1-12)
- Robotics for Basic Education (Grade 1-12)
- Singapore Training for Business and Finance Students
- Tourism and HM Singapore Training in SHATEC
- Certified Financial Markets Professional (CFMP)
- Certified Cloud System Analyst (CCSA)
- Certified Advanced Equity Analyst (CAEA) Certified Artificial Intelligence Professional (CAIP)
- Certified Advanced Technical Analyst (CATA)
- Certificate in Introduction to Equities
- Risk Management Associate (RMA) Certificate in Introduction to Forex
- Certified Digital Marketing Professional (CDMP) Certificate in Practical Finance and Investment
- Certified Data Science Associate (CDSA) Certificate in Introduction to Python
- Certified Data Science Professional (CDSP) Certificate in Introduction to Cloud
- Certified Information Security and Data Privacy Practitioner (CISDP)
- Certificate in Introduction to Artificial Intelligence
- Certified Supply Chain Associate (CSCA) Certificate in Introduction to Data Science
- Certifies Supply Chain Professional (CSCP)
- Certified Blockchain Associate (CBA)
- Certified Blockchain Professional (CBP)





# Microcredentials

- Microsoft Office Specialist (MOS) Excel Basic and Expert
- Certificate in Introduction to Cybersecurity 1
- Microsoft Office Specialist (MOS) Word Basic and Expert
- Certificate in Introduction to Cybersecurity 2
- Microsoft Office Specialist (MOS) Powerpoint Certificate in Ethical Penetration Testing
- Microsoft Office Specialist (MOS) Access Cybersecurity Course BT 1 Networking and Cybersecurity
- Certificate in Emotional Intelligence Cybersecurity Course BT 2 Windows Linux
- Certificate in Winning Pitch Cybersecurity Course BT 3 Penetration Testing
- Certificate in Applied Quantitative Business Analytics CC Advanced Network Defense A
- Certificate in Professional Business Communication CC Advanced Monitoring The Network
- Certificate in Organizational Human Management CC Advanced Python Security
- Introduction to Equities CC Advanced Malware Analysis and Reverse Engineering
- Introduction to FOREX CC Advanced C/C++, Vulnerabilities, Exploits and Countermeasures
- Introduction to Digital Marketing CC Advanced Assembly Module 1
- Introduction to Data Science CC Advanced Programming A Project
- Introduction to Artificial Intelligence (AI) CC Professional Data Analytics 1 - Lifecycle and Methodology
- Introduction to Data Science CC Professional Cyber Operations
- Introduction to Cryptocurrencies CC Professional Cyber Operations
- Introduction to Machine Learning Certified Cybersecurity Associate (CCA)
- Introduction to Metaverse Certified Cybersecurity Professional (CSP)
- Introduction to Blockchain CC Advanced Malware Analysis and Reverse Engineering
- Introduction to Robotics Adobe Certified Professional (Photoshop Illustrator, InDesign, After Effects, Premiere, Pro Animate)
- Introduction to Cloud Autodesk Certified User (AutoCAD, Fusion 360, Inventor)
- (Imperial | Metric), Revit Architecture (Imperial | Metric), Autodesk Certified User



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# AIMEE DE GUZMAN

General Manager

East West International Educational  
Specialists, Inc.

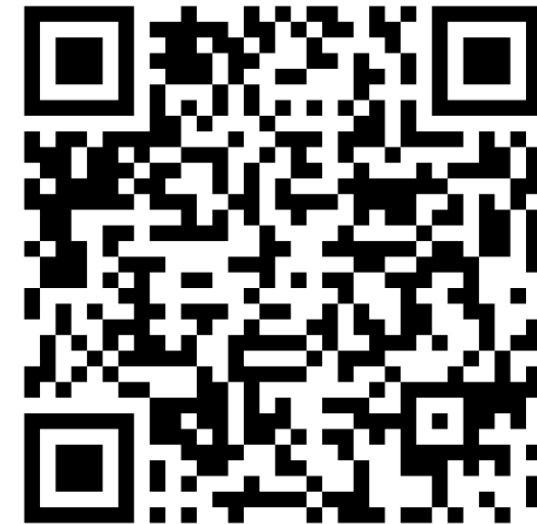
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FB: EastWestIESI

Website: [www.eastwestiesi.com](http://www.eastwestiesi.com)



Scan me!

# Thank you so much...

