The Importance of Youth in Developing Internet Infrastructure in the Asia Pacific Region

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Asia Pacific Next Generation

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Impact of APAC

As of January 2023, there were **5.16 billion** Internet users worldwide, which is **64.4 percent** of the global population.

As of 2022, Asia was home to the biggest number of online users worldwide—over **2.9 billion** at the latest count.

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Youth of APAC

As of 2022, APAC Internet usage was higher among individuals between 15 and 24 years old—over **2.1 billion** or around **73 percent** of its total online users.

APAC Internet usage among individuals between 15 and 24 years old represents approximately **26.2 percent** of the global population.

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Role of Youth

The Internet has become an integral part of our daily lives, connecting people, businesses, and governments around the world.

To ensure the continued growth and success of the Internet, it is crucial to prepare the next generation for building and maintaining Internet infrastructure.

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Role of Youth

Young people can bring fresh perspectives, creativity, and innovation to Internet infrastructure development.

By fostering a culture of innovation and creativity among young people, we can create a more dynamic and adaptive Internet infrastructure that meets the needs of the future.

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Role of Youth

Staying up-to-date with the latest technologies is critical to Internet infrastructure development.

Young people, often more tech-savvy than their older counterparts, can enhance the performance and security of future Internet infrastructure and stay ahead of the curve.

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Youth Initiatives

Do our youth initiatives align with the needs and interests of youth Internet users?

Youth initiatives mainly focused on technology, engineering, or Internet governance may not necessarily address the needs and interests of a broader range of youth Internet users.

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Role of APNG

The role of the Asia Pacific Next Generation (APNG) in youth empowerment is leveraging new technologies and online platforms to engage with and empower diverse youth populations in the Asia-Pacific region.

Exploring our fast-evolving world, mediated by new technologies, more freely with the next generation can help ensure that youth in the region are prepared to thrive in an increasingly digital and interconnected world.

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Role of APNG

Delving deep into online user communities and cultures can also help us better understand the needs and interests of youth in the region and identify opportunities to engage with and empower them.

By bringing more diverse youth populations together and creating opportunities for youth from different backgrounds to connect and collaborate, APNG can help break down barriers and foster greater understanding and inclusivity in the region.

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Role of APNG

Empowering diverse youths with our vision for the Internet in the Asia-Pacific region can help inspire and mobilize young people to take action toward creating a more positive and equitable future for themselves and their communities.

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Collaborations to Develop

1. Inter-Asian Collaboration
2. Inter-Sectoral Collaboration
3. Inter-Generational Collaboration

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Collaborations to Develop

Inter-Asian Collaboration

- Provide a more diverse pool of mentors to help mentees gain exposure to a broader range of perspectives and approaches.

- Offer additional resources, such as training or networking opportunities, to help mentees build their skills and connect with others in their field.

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Collaborations to Develop

Inter-Sectoral Collaboration

- Incorporate more voices from under-represented communities to ensure a truly inclusive and inter-sectoral approach.

- Provide opportunities for participants to develop initiatives and projects that address issues related to equity and access to technology.

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Collaborations to Develop

Inter-Generational Collaboration

- Create more structured and formalized mentorship programs that provide ongoing support and guidance for young Internet leaders.

- Offer more opportunities for participants to collaborate on projects and initiatives that have a tangible impact on society.

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Camp	Year	Month	Venue	Participants (Countries)		Fellows (Countries)	
1st	2002	February	Bangkok, Thailand	28	(8)	0	(0)
2nd	2002	August	Shanghai, China	61	(10)	0	(0)
3rd	2003	February	Taipei, Taiwan	50	(8)	0	(0)
4th	2003	August	Busan, Korea	30	(4)	0	(0)
5th	2004	July	Cairns, Australia	40	(16)	15	(10)
6th	2005	February	Kyoto, Japan	60	(20)	25	(16)
7th	2005	August	Taipei, Taiwan	40	(18)	20	(12)

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Camp	Year	Month	Venue	Participants (Countries)		Fellows (Countries)	
8th	2006	July	Singapore	40	(11)	18	(11)
9th	2007	August	Xi'an, China	60	(16)	28	(13)
10th	2008	August	Bangkok, Thailand	107	(22)	93	(22)
11th	2009	July	Kuala Lumpur, Malaysia	63	(17)	40	(17)
12th	2010	July	Hiroshima, Japan	174	(21)	47	(21)
13th	2011	February	Hong Kong	50	(16)	30	(16)
14th	2012	August	Seoul, Korea	60	(17)	26	(16)

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APNG CAMP 15

MANILA, PHILIPPINES
25-27 FEBRUARY 2022

Adapting to the New Normal Through Online Learning and E-services in Health and Education

ONLINE EDUCATION

Initiatives, applications, or Internet technologies that enable students, teachers, parents, and school administration to make online classes more effective and efficient. These include tools, software and processes used for online learning, webinars, online workshops, conferences and expos.

HEALTHCARE

Health-related initiatives, projects, and Internet technologies that mitigate and improve the condition of individuals and organizations as they address the pandemic. These include programs implemented to help ease the unexpected influx of patients in hospitals and efficiently manage limited resources.

ENTREPRENEURSHIP

Initiatives, projects, and Internet technologies that help develop startups and transform existing businesses to adapt to the new normal and be locally and globally competitive. These include new ways of utilizing social media for business delivery and continuity and consumer safety and convenience.

TECHNOLOGIES AND POLICIES

Other ways and means by which private and public organizations have adjusted their traditional operations in order to protect and ensure safe and secure online implementation of policies and procedures. These include blockchain, digital badges, online payments, and online donation platforms.

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Keynote Speech

Toward "Un-Wired" with Internet-by-Design

Dr. Hiroshi Esaki

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Attack and Defense for the New Normal: Healthcare and Educational Institutions as Examples

Dr. Benson Wu

🇹🇼

Artificial Intelligence and Medical Imaging Informatics in Healthcare: Opportunities and Challenges for Low Resource Countries

Dr. Bishesh Khanal

🇳🇵

Thriving in the New Normal through Digital Transformation: The Philippine National Police Experience

PLTCOL Ma. Angela Salaya

🇵🇭

Making Weather News More Accurate and Responsive: The Power of Technological Innovations and Human Supporters

Tomohiro Ishibashi

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Adapting to the New Normal Through Online Learning and E-services in Health and Education

VIXION: A Low-Bandwidth Solution to Inclusive Online Learning with AI Proctoring
Psylocke Antonio

Online Oral Assessment Support System for Large-Scale Japanese Speaking Courses Abroad
Yuka Kataoka

Role of Library on Community Development in Myanmar
Thant Thaw Kaung

Pro, Cons, and Security Issues with E-Learning Platforms
Alice Lau

Form Development Technique in Product Design Education
Ketan Madan Chaturmutha

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Adapting to the New Normal Through Online Learning and E-services in Health and Education

Twitter Data Classifier Web Application: How Twitter Data Can Create Value for the Government
Gian Lloyd Jacoba

A Predictive Study on the Relevance of Twitter in Disaster Risk Management
Karisha Marie Presillas

Analyzing Twitter Sentiment for Forecasting Cryptocurrency Market Movement Using Machine Learning
John Laryn Corsino

Adapting to the New Normal Through Online Learning and E-services in Health and Education

Web Application to Monitor the Risk of a Stroke
Karstn Paul Ancheta

A Recommender System for Philippine Healthcare: A Data-Driven Approach in Contraceptive and Maternal Health
Ryan Matthew Neil Tomelden

Development of the Contact Tracing Management Information System (CTMIS)
Jan Keith Campus

ConnectCare
Nabeel Quadri

EDUCHIEL: Integration of Mental Health Practices in Students' Educational Habits through Machine Learning
Phoenix Antonio

EDUCHIEL: Integration of Mental Health Practices in Students' Educational Habits through Machine Learning

PHOENIX ANTONIO
University of the Philippines

Artificial Intelligence for Attendance-tracking and Proctoring

- Detection as opposed to recognition with respect to privacy regulations with opt-in option
- 3D real-time monitoring on 468 face landmarks without recording (default setting; possible opt-in)
- Monitors attentivity based on eye movements, microexpressions, and behaviour analysis
- Generates attendance and attentivity reports for class admin

Psylocke Antonio, Heimdall Digital
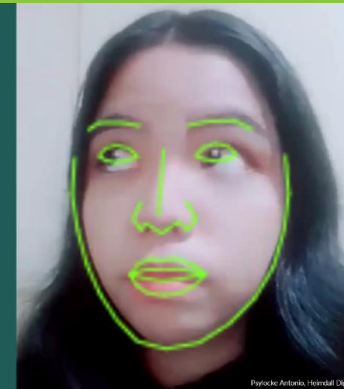
ATTACK TOOLS

- Toolkits on kali linux that help you social engineer people with the info you gain from educational platforms (Social Engineering)
- Payments on e-learning platforms might be embedded with javascript skimmer
- Human error, through 3rd party platforms

ATTACK

- April 2020: "Zoom bombing"
- May 2020: Data breach In Unacademy, 22 million users of Unacademy were reportedly available for sale on darknet forums
- Sep 2020: Man arrested with threatening attack after "Zoom bombing" and making physical bomb threats
- Nov 2020-Mar 2021: Data breach at Florida: Broward County School District leaked in $40m Ransomware Attack impacts 50,000 students and employee.
  - Broward County Public Schools Notice of Compromised Data Resulting from Security Incident(PDF)
- Mar 2021: Microsoft reported that cyber criminals have exploited vulnerabilities in Microsoft Exchange Servers to install ransomware on a network.

Our approaches (1/2)

Effective use of Learning Management System (LMS) for large-scale Japanese language education
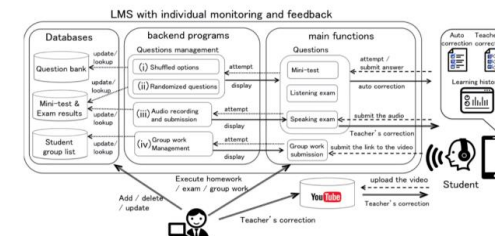
An extended LMS with individual monitoring and feedback [5]

2.4 Tech Age Girls Project

Mobile ownership
% of Myanmar's population aged 15-65

Myanmar total 40% | Male 47% | Female 33%

Objective
- Gender gap – only 35% use technology
- To get Girls leadership in community
- (100) girls of age 16-20 yrs are recruited
- Train Technology and Leadership skills
- All are library based activity

isif asia | Microsoft | ooredoo | MBAPF | BEYOND ACCESS | IREX

Form development technique in Product Design Education

ONLINE EDUCATION

Ketan Chaturmutha (PhD Scholar)
Indian Institute of Technology Hyderabad
Department of Design, IIT Hyderabad Kandi, Sangareddy
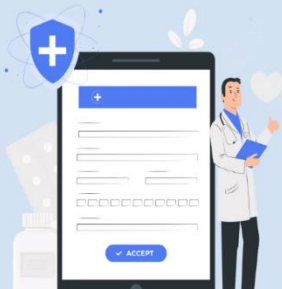Telangana - 502284 India
md21reschu1005@iith.ac.in

Image Courtesy: Sumedh Shivanagi, Student at MVPS'S College of Architecture and Centre for design, Nashik.

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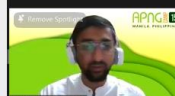
Machine Learning-Based Physical and Mental Health Aid with Systematized Records

by HealthFix

Karstn Paul Ancheta | Phoenix Antonio | Ryan Matthew Neil Tomelden

possible physical and mental health concerns

machine learning-based reminders and tips

integrated physical and mental health records

PIN protection/ password/ pattern lock

trusted contacts for emergency purposes

Phoenix Antonio

"Portable Library for Students in Remote Areas"

By Extended Hands
(Psylocke Antonio / Kalpesh Chaudhari / Alice Lau / Yuka Kataoka / Mendana Kere)

- We, "Extended Hands" focused on a problem of educational inequality of children in remote islands. Our NGO group "Portable library" will extend our hands to help them to ensure a quality of education and promote inclusive education.
- "Portable library" has three main features: 1) distribute **offline/online** network & devices for remote areas, 2) promote **the importance of education** especially in the remote areas/to our target audience, and 3) foster inclusive education.
- As an action plan, we will start our activity by following 3 stages 1) pilot run in our target area, 2) NGO-to-students stages to provide offline education, 3) NGO-to-student stage to provide online education
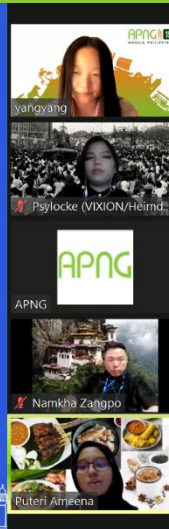
Psylocke (VIXION/Heimdall, Philippines)

LaunchAsia

Bridging the gap between technical industry players and investors in preparation for the technological future of Asia.
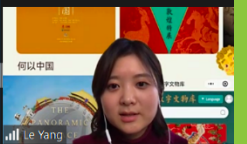#Inclusivity
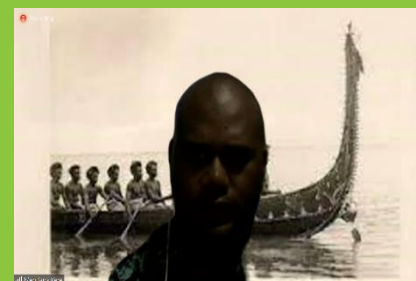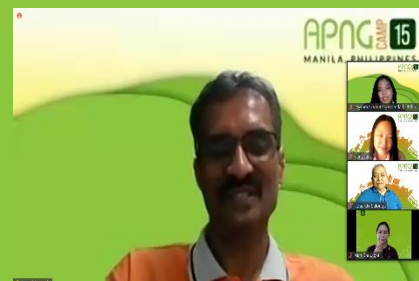
yangyang

Psylocke (VIXION/Heimd...

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Namkha Zangpo

Puteri Ameena

INTERNET GOVERNANCE for DIGITAL RESILIENT SOCIETY

Internet Governance Team Member:
Le Yang, Namkha Zangpo, Susan Garae
Mentors: Sagarika Wickramasekra, Sunny Chendi

Le Yang

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Adapting to the New Normal Through Online Learning and E-services in Health and Education

Bhutan   China   India   Indonesia

Japan   Malaysia   Nepal   Pakistan

Philippines   Solomon Islands   Sri Lanka   Vanuatu

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APNG at APNIC 50

New Normal Life with AI on the Internet
September 2020

1. **AI and Connected Health – Now and Beyond the Pandemic**
   Sam Goundar

2. **Future of Cybersecurity Through Autonomous Systems and Human-AI Collaboration**
   Benson Wu

3. **Business Process Automation with RPA and CHATBOT**
   Khan Md. Anwarus Salam

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APNG at APNIC 50

New Normal Life with AI on the Internet
September 2020

4. **Travel Safely around our World with 'TheSafeCheck'
    Novel AI Technology for COVID-19 Travel Policy**
    Joan Lai

5. **How AI Can Feed 5 Billion People In APAC**
    Miller Rajendran

6. **Artificial Intelligence in Medical Diagnosis and Patient Care**
    Dihan Morawaka

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APNG at APRICOT 2021

Languages on the Internet

March 2021

1. **Towards a Multilingual Internet**
    Satish Babu

2. **Why Silicon Valley is Worsening the North / South Digital Divide and How to Fix It**
    Divon Lan

3. **The Recent Work on Internationalized Domain Names (IDNs) in South and East Asian Scripts and Especially in Sinhala**
    Harsha Wijayawardhana

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APNG at APRICOT 2021

Languages on the Internet

March 2021

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APNG at APNIC 52

E-Health

September 2021

1. **AI-powered eService for Discovery of Medical Knowledge: Application to COVID-19**
   by Jeffrey D. Saffer

2. **KhunLook: A Personal Health Record on Your Mobile Phone**
   Kunwandee Sripanidkulchai

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APNG at APNIC 52

E-Education

September 2021

1. **New Paradigm Shift in Teaching-Learning Process with the Pandemic**
   Dr. N. Sudha Bhuvaneswari

2. **Pursuit of Inclusive and Equitable Quality Education for All**
   Abdul Matin Sheikh

3. **The Adoption of e-Learning, m-Learning and HyFlex During a Pandemic: An APNIC Academy Perspective**
   Peter Blee

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APNG Webinar Series 2020

Post-COVID New Normal: Work from Anywhere
Sumith Gamage (July)

Cybersecurity Tips for Post-COVID New Normal
Benson Wu (August)

Digital Transformation and RPA Journey
Kashif Adeel (October)

Application of Blockchain Technologies: Research and Practice
Sam Goundar (November)

How to Build Your Own Chatbots
Anwarus Salam (December)

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APNG Webinar Series 2021

Trust and Security on the Internet
Geoff Huston (June)

Small Business Entrepreneurship Challenges via Social Media
Nalin Abeysekara (August)

COVID-19 Learning Challenges and Solutions
Glenn McKnight and Alfredo Calderon (October)

Innovations in Robotics, AI and Industry 4.0 - The Cloud Perspective
Kennedy Okafor (December)

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APNG Webinar Series 2022

Machine Learning Applications in Food Engineering
Dr. Gururaj H L (February)

Mobile Edge Computing: Architectures, Applications and Challenges
Dr. Anand Nayyar (April)

Cybersecurity in IIoT Towards Industry 4.0
Dr. Kalika Suksomboon (June)

Blockchain for the Internet with Trust
Dr. Kotaro Kataoka (October)

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Challenges

1. Fundraising
2. Volunteer Base

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Education + Empowerment

Education and empowerment are critical for the youth in this digital age.

We must maintain the original spirit of the internet, apply valuable lived experiences to other newly emerging technologies, and fight against various forms of inequity, particularly the digital divide. By doing so, we can ensure that technology remains a tool for progress, equality, and positive change.

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