



# Panaverse

## Certified Web 3.0 and Metaverse Developer Program

Preparing Developers Globally for the Next  
Generation of the Internet

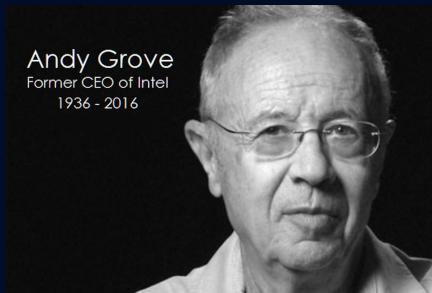
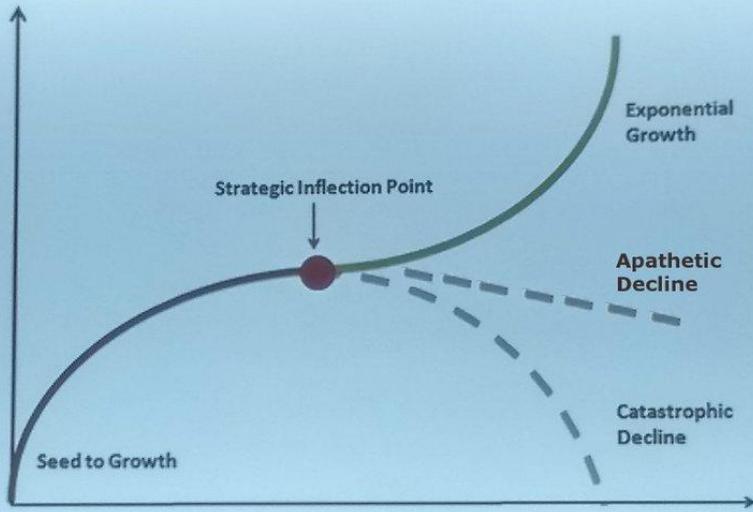
Zia Khan

MA, MBA, MAC, MSE, CPA, and CMA  
<https://www.linkedin.com/in/ziaukhan/>

[www.panaverse.co](http://www.panaverse.co)

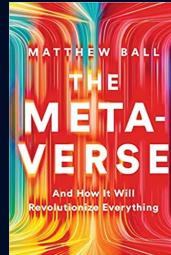


# Strategic Inflection Point



“The future of the internet: A massively-scaled, persistent, interactive, and interoperable real-time platform comprised of **interconnected virtual worlds where people can socialize, work, transact, play, and create.**”

**—Matthew Ball**



The Metaverse: And How it Will  
Revolutionize Everything

# **Gross Metaverse Product (GMP)**

**UAE's economic success to be measured using 'Gross Metaverse Product' instead of GDP**

**Khaleej Times**

**Minister of State for Artificial Intelligence, at Emirate's Metaverse Strategy at the Dubai Metaverse Assembly  
Wed 28 Sep 2022**

**“The metaverse is a 3D version of the Internet and computing at large.”**





BBC NEWS



# Metaverse Use Cases



SMART  
MANUFACTURING



HEALTHCARE



EDUCATION



DEVELOPER/  
CREATOR ECONOMIES



VIRTUAL  
ADVERTISING



VIRTUAL SPACES/  
COMMUNITIES



SOCIAL  
COMMERCE



DIGITAL EVENTS/  
CONCERTS/TOURISM



VIRTUAL CITIES/  
PUBLIC SERVICES

# 13 Trillion

Citi estimates that total addressable market for the Metaverse Economy could grow from \$8 Trillion to \$13 Trillion with 5 billion unique global users by 2030.

[Metaverse and Money: Decrypting the Future](#)



# Metaverse Market Potential

Metaverse: narrow definition  
2030 VR/AR headset users

900mn-1bn



Total addressable market estimate

\$1tn-\$2tn

Metaverse: broad definition  
2030 unique internet users

5bn



Total addressable market estimate

\$8tn-\$13tn

# Money in the Metaverse

The Metaverse will include existing forms of payments such as credit cards with Fiat money.

In addition, new forms of payments will be accepted:

- Cryptocurrency & Tokens
- Stablecoins
- Central Bank Digital Currencies (CBDCs)



## In-Game Tokens



### Examples

Robux, Minecraft,  
Linden dollars

### Key Use Cases

Gaming

### Limitations

Withdrawal Limits,  
Centralized  
Platform T&C, No  
Interoperability

## Cryptocurrency



### Examples

Bitcoin, Ethereum,  
Polygon, etc.

### Key Use Cases

Virtual lands, NFTs,  
Gaming, DeFi

### Limitations

Volatility, Energy  
Usage (Proof-  
of-Work based),  
Anonymity and  
AML Concerns

## Stablecoins



### Examples

USDT, USDC, Dai,  
BUSD

### Key Use Cases

DeFi, International  
Payments,  
Settlement Currency  
for Trading,  
Entertainment,  
Shopping, Tourism

### Limitations

Anonymity and  
AML Concerns,  
Collateralization  
Requirements

## CBDCs



### Examples

e-CNY, e-Naira,  
Sand Dollar

### Key Use Cases

Domestic  
Payments, Targeted  
Subsidies, Public  
Affairs, Healthcare,  
Tourism

### Limitations

Predominant  
Domestic Use Case  
a Challenge on  
Open Metaverse

## Fiat Money (Current)



### Examples

USD, GBP, EUR, CNY

### Key Use Cases

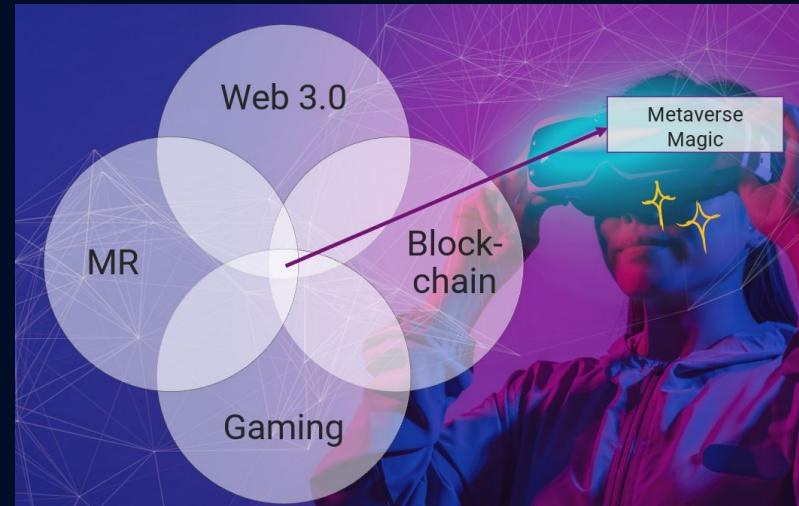
Traditional  
Financial Services,  
Credit Cards  
for Consumer  
Protection-Linked  
Use Cases

### Limitations

Non-Tokenized,  
Account-Based,  
Micro-Payments  
Tough

# What does Web 3 have to do with Metaverse?

- Based on ownership and decentralization and facilitated via blockchain, Web3 refers to the conceptual third iteration of the internet.
- The so-called “Open Metaverse” is built upon blockchain – mainly the Ethereum chain – and overlaps with Web3.
- Many Web2 centralized platforms will play an important role in the Metaverse, and even Web3 today relies on elements of centralization.



# What's the Role of NFTs in the Metaverse?

- NFTs in the Metaverse enable a form of sovereign ownership for users/owners and are
  - Tradeable
  - Composable
  - Immutable
  - Mostly interoperable
- Increased interest from gamers, investors, and corporates in the NFT space in recent months.
- NFTs in the Metaverse are virtual items stored in a digital wallet that can be taken everywhere within the Metaverse.



# What's the Role of AI in the Metaverse?

- AI for immersive digital worlds
- AI as a creative partner
- Intelligent networking
- Smart hyper-personalized games, experiences, education and welfare



# What's the Role of APIs in the Metaverse?

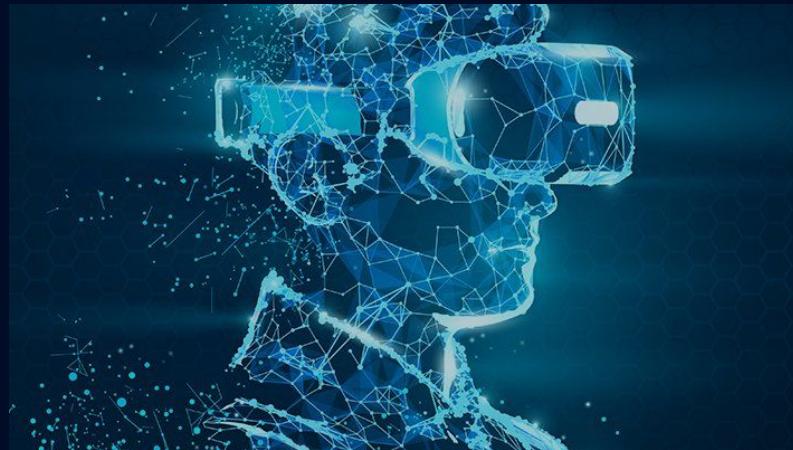
APIs will:

- Help create the Metaverse.
- Speed up immersive experiences development time and cut costs.
- Be used by Metaverse Developers to change product code without needing to start from scratch.
- Be used more heavily in the future, as the Metaverse proliferates.
- Be a fundamental building block of Metaverse, Web 3.0 and the future of the internet.



# What's the Role of Cloud Computing in the Metaverse?

- The essence of the Metaverse is still cloud computing.
- Scalable AI and APIs can only be built economically on the cloud.
- Only Serverless Cloud Computing can meet the scalability requirements of the Metaverse.
- What Metaverse itself needs is computing, storage, machine learning, etc., which are inseparable from cloud computing.
- The architecture of Metaverse will be event-driven which means it will be a Serverless Metaverse.





# Global Tech Talent Shortage

- The global talent shortage already amounts to 40M skilled workers worldwide.
- By 2030, the global talent shortage is predicted to reach 85.2M workers. Companies worldwide risk losing \$8.4T in revenue because of the lack of skilled talent.
- According to a CNBC report, the software developer shortage is alarming in 2022. The rate of unfilled IT jobs in USA increased to 918,000 vacancies at the end of 2021.
- Another report noted that by 2030, the number of software job vacancies would rise by almost 22%. The average growth rate of software developers in the USA is only 8% right now, and that clearly emphasizes there is already an overwhelming and severe shortage of skilled workers.



**85 Million  
By 2030**

# So who will build the Metaverse?



# A Global Mass Developer Training Program will Solve the Talent Shortage



# Panaverse is Unlike Any Other Program



EARN  
WHILE YOU  
LEARN

# Panaverse is a Hybrid Organization

Our Panaverse Certified Web 3.0 and Metaverse program will be a hybrid of a business entity and an educational institution i.e. it will be a division of Panacloud and a program of PIAIC.

The mission statement of the Panaverse (a division of Panacloud) is to become the largest and most profitable Jamstack, Web 3.0, and Metaverse Template provider on:

<https://themeforest.net/>

<https://sketchfab.com/>

# The Panaverse Team

**Faculty:** Daniyal, Zia, and Ali.

**Remote Faculty:** Hira and Adil

**Technical Consultants:** Zeeshan, Moshin, Aamir, Arsalan, Waris, Murtaza, Uzair, Tanzeel, Hasan, and Mateen.

**Panaverse CEO:** Hamzah Syed (Also COO of Section B)

**COO Section A Tuesday Karachi Class:** Mubashir Ali

**COO of all sections will be selected soon.**

# **Study Plan**

- **4 Hours of Onsite Classes per Week**
- **2+ Hours of Live Online Classes per Week**
- **Pre Recorded Videos**
- **Presentation Projects**
- **Coding Projects**
- **Complete Projects to Earn Dollars**

# **Prime Directives of the Program**

**Students who do not fulfill these three requirements will immediately be dropped from the program:**

- Pass All Quizzes**
- Complete and Submit All Projects  
(No copy-paste allowed)**
- Earn Dollars in the International market, as per faculty direction**

# Developer Skill Set: Web2



## TypeScript

Frontend & Backend  
Development



## VS Code

Integrated Development  
Environment



## Next.js

Front End Development  
Framework



## AWS CDK

Infrastructure as Code



## Serverless

AWS Lambda, API Gateway,  
AppSync, and Aurora for API  
Development



## CLI

Panacloud CLI for API  
Development

# Developer Skill Set: Web3



Ethereum



Solidity



OpenZeppelin



Hardhat



Ethers.js



Metamask



Alchemy



The Graph



Chainlink

# Developer Skill Set: 3D



## WebGPU

Three.js - JavaScript 3D  
Library



## WebXR

Three.js - JavaScript 3D  
Library



## DAPP

Designing Metaverse DAPP  
Experiences



## C#

Unity XR Programming



## Unity 3D

3D Development Platform



## Blender

3D Modeling

# 1 Year Certification Program

- Onsite, Online, and Pre-recorded classes
- Partnerships with Universities and NGOs to utilize excess capacity on weekends and evenings.
- Onsite classes in auditoriums.
- Four hours of onsite classes per week, the rest in online classes and recorded videos.
- Two hours of online classes per week.
- Students selected based on entrance exams at a mass level.
- Program cost less than \$20 per month.





# 1 Year Post Graduate Diploma



PGD in Web 3 and Metaverse				
ID	Quarter	C-Code	Course Title	Cr-H
1	1		Intro to Computer Science	3
2	1		Introduction to Programming	3
3	1		Object Oriented Programming	3
4	2		Advanced Web 2.0 Development	3
5	2		Metaverse Development	3
6	2		Smart Contract Development	3
7	3		Decentralized App Development	3
8	3		Cross Platform Metaverse Development	3
9	3		Serverless API Development	3
10	4		Advanced Web 3.0 Development	3
11	4		Computer Graphics Programming	3
12	4		Designing & Developing Metaverse DApp Experiences	3
Total				36



# 2 Year Associate's Degree



Associate's Degree in Computer Science (Web 3 and Metaverse)

ID	Semester	C-Code	Course Title	Description	Cr-H
1	1		Intro to Computer Science	Web 3 & the Metaverse	3
2	1		Introduction to Programming	C# for Metaverse	3
3	1		Object Oriented Programming	TypeScript	3
4	1		English-I	Elective - Expository Writing	3
5	1		UI/UX Design	Elective - Arts & Humanities	3
6	1		Linear Algebra	Elective - Quantitative Reasoning	3
7	2		Advanced Web 2.0 Development	NextJS	3
8	2		Metaverse Development	Unity & C#	3
9	2		Smart Contract Development	Solidity & Hardhat	3
10	2		English-II	Elective - Expository Writing	3
11	2		Pakistan Studies	Elective - Civilization Courses	3
12	2		Applied Physics	Elective - Natural Sciences	3

# 2 Year Associate's Degree

Associate's Degree in Computer Science (Web 3 and Metaverse)					
ID	Semester	C-Code	Course Title	Description	Cr-H
13	3		Decentralized App Development	EthersJS, NextJS, & Solidity	3
14	3		Cross Platform Metaverse Development	Unity & C#	3
15	3		Serverless API Development	Amazon Web Services	3
16	3		English-III	Elective - Expository Writing	3
17	3		Tokenomics	Elective - Social Sciences	3
18	3		Physics for Game Developers	Elective - Natural Sciences	3
19	4		Advanced Web 3.0 Development	DAO, Oracles, Graphs, DeFi, & Tokenomics	3
20	4		Computer Graphics Programming	Elective - Quantitative Reasoning	3
21	4		Designing & Developing Metaverse DApp Experiences	Elective - Arts & Humanities	3
22	4		Political Science & Government	Elective - Social Sciences	3
23	4		Comparative Religion	Elective - Civilization Courses	3
Total					69

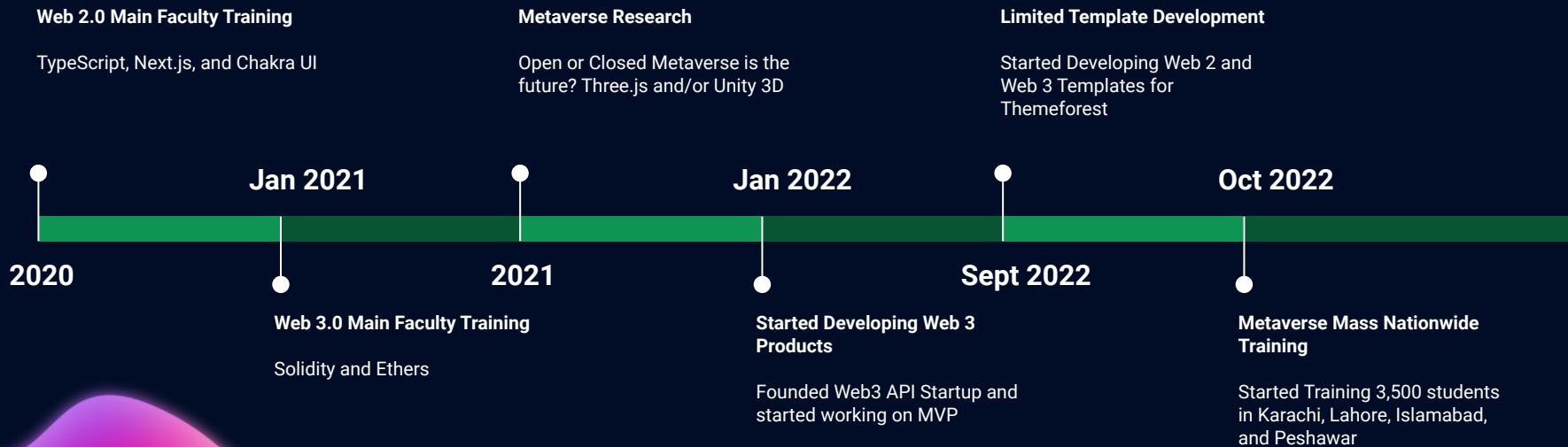
# Why Us?

We have Extensive Experience of Conducting Mass Training Programs. Currently, we are running the President of Pakistan's Initiative for AI & Computing (PIAIC).

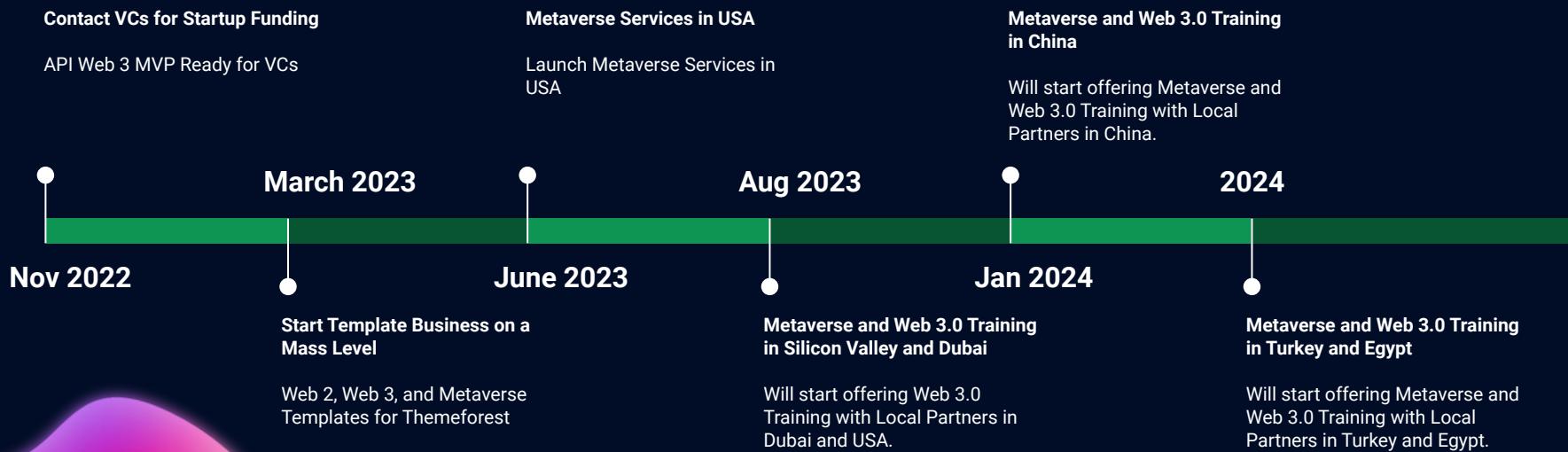


[www.piaic.org](http://www.piaic.org)

# The Pakistan Panaverse Timeline



# The Global Panaverse Timeline





# Panaverse: Certified Web 3.0 & Metaverse Developer

[www.panaverse.co](http://www.panaverse.co)

<https://discord.gg/GggDkBwJDr>

[https://twitter.com/Panaverse\\_edu](https://twitter.com/Panaverse_edu)

<https://www.facebook.com/groups/panaverse>

The image shows a computer monitor displaying a webpage for a "Certified Web 3.0 and Metaverse Developer" program. The page has a green header with white text: "Certified Web 3.0 and Metaverse Developer: A Nationwide Program in Karachi, Lahore, Islamabad, Peshawar, and Faisalabad". Below the header, there is a section with smaller text: "Getting Ready for the Next Generation and Future of the Internet - join a 13 Trillion Dollar Industry with 5 Billion Users". The main content area contains the same program details again. At the bottom, there is a blue button labeled "APPLY FOR ADMISSION NOW" and some smaller text: "Watch the Insane Future of Web 3.0 and Metaverse Video in Urdu" and "Study The Panaverse Plan". The monitor sits on a black stand against a dark background.