



National Institute of Electronics and Information Technology Chandigarh

An Autonomous Scientific Society under the administrative control of
Ministry of Electronics & Information Technology (MeitY), Government of India

Permanent Campus at Birla Farms, Bada Phull, (adj. to IIT Ropar)
Rupnagar (Ropar)- 140001

Government Officials Training GOT-Basic/Advanced

On

Augmented and Virtual Reality

under FutureSkills PRIME Scheme





FutureSkills Prime, India's Technology Skilling Hub, is a joint initiative by NASSCOM & MeitY, Govt of India to enable digital skilling at scale. It aims to make India the Digital Talent Nation by democratising learning. With NASSCOM Certifications endorsing their technology skills, learners can open doorways to digital career opportunities.

Build the Skills to Rise with the Opportunity

Acquire interdisciplinary skills that combine technical expertise, IT skills and knowledge of digital technologies to pioneer transformation. Develop expertise for in-demand roles like data scientist, business intelligence analyst, full stack developer, information security analyst, machine learning engineer, etc.



FutureSkills PRIME – Ten Technologies

- ✓ Artificial Intelligence
- ✓ Virtual Reality
- ✓ Big Data Analytics
- ✓ Blockchain
- ✓ Cloud Computing
- ✓ Cybersecurity
- ✓ Internet of Things
- ✓ Web & Mobile Development
- ✓ Robotic Process Automation
- ✓ 3D Printing

GOT-BASIC/GOT-ADVANCED conducted since 2024

- ❖ Bureau of Investigation, Punjab Police
- ❖ National Institute of Technical Teachers Training and Research (NITTTR)
- ❖ Post Graduate Government College, Sector 11, Chandigarh
- ❖ Punjab School Education Board (PSEB)
- ❖ Department of Higher Education, Punjab
- ❖ State Council of Educational Research and Training, Punjab (SCERT)
- ❖ Department of School Education, Punjab
- ❖ Indian Army



For more details, visit our website



**28 million
new tech jobs
will be created in India
by 2025.**

GOT- Basic/ Advanced

On

Augmented and Virtual Reality

under FutureSkills PRIME Scheme

Executive Director:-

Deepak Wasan
(Executive Director)
01881-257002

Chief Investigator:-

Anita Budhiraja
(Additional Director)
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a.budhiraja@nielit.gov.in

Coordinator:-

Dr. Sarwan Singh
(Joint Director)
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sarwan@nielit.gov.in

Speakers:-

Dr. Sarwan Singh
(Joint Director)

Mr. Nikshep Paliwal
(Project Engineer)

Mr. Amrinder Singh
(Project Assistant)

NIELIT Chandigarh in association with CDAC is organizing five days free of cost Bootcamp on **Augmented and Virtual Reality (AVR)** for college students under FutureSkills PRIME Scheme.

About Training Programme

The Bootcamp program in **Augmented and Virtual Reality (AVR)** is designed to provide key insights and hands-on experience with real-world applications of AR/VR and game development. As part of the **GOT-A/GOT-B**, industry and academic experts will share best practices and techniques to help participants develop games after completing the course.

Objective of Training Programme

The main objectives of the course were as follows:

Help participants understand advanced concepts of game development using Augmented and Virtual Reality.

Make participants experts on the Unity Platform and with AR and VR applications.

Enable participants to develop professional games and build real-time applications and solutions using Augmented and Virtual Reality.

Target Audience

Basic:- The training is for employees having prior experience in IT/ITeS and related areas, and working in Central/State Governments, PSUs, and Autonomous organizations

Advanced:- The training is for employees having prior experience in IT/ITeS and related areas, and working in Central/State Governments, PSUs, and Autonomous organizations

Advanced Syllabus

Basic Syllabus

- AVR – Evolution, application areas, Hardware-software Transformation: zooming, panning, clipping, rotation, rendering
 - A-Frame: Introduction, Installation, AR/VR Handsets, Web VR Browsers. Introduction to Entity Component System, JavaScript, Events.
 - Tools: three.js, 3D Models, Visual Inspector, Dev Tools Augmented Reality App in Vuforia within Unity SDK
-
- Creating & activating Unity project, targets, scene, frame animation, morphing Handling web camera output, canvas, image tracking
 - Spark AR, AR application development with AR Kit Case Studies / Use Cases: Education, Public Health, etc.



Lead Centre : Centre for Development of Advanced Computing (CDAC), Pune

Co-Lead Centre : NIELIT Chandigarh

Ropar Campus: Bada Phull, Birla Farms, (near IIT Ropar) Ropar
Chandigarh: Facility at IETE Building, Sector 30B, Chandigarh

Government Officials Training -Advanced Sample Certificate and Score Card



CERTIFICATE
OF COMPLETION

THIS IS TO CERTIFY THAT

Kanwar Randeep Singh
has successfully completed
Government Official Training - Advanced
on
Augmented and Virtual Reality
conducted by NIELIT Chandigarh held during
November 18, 2024 to November 29, 2024 as part of FutureSkills PRIME Project.

Anita Budhiraja
Chief Investigator
Scientist - E
NIELIT Chandigarh

Deepak Wasan
Center Head
Executive Director
NIELIT Chandigarh

Date of Issue: 20th Dec, 2024

FSP/GOTA/NIELITCHD/ARVR/CDACPUNE/01/2411/1

FutureSkills PRIME - A MeitY & nasscom Digital Skilling Initiative



SCORE CARD
(GOT-Advanced)

Center Name : NIELIT Chandigarh
Course Name : Augmented & Virtual Reality Acceleration

Candidate Name : Kanwar Randeep Singh
Certificate Number : FSP/GOTA/NIELITCHD/ARVR/CDACPUNE/01/2411/1
Course Code : FSP/NIELITCHD/ARVR/CDACPUNE/01/GOTA/01

SR No.	Module Name	Max. Marks	Practical Marks (A)	Theoretical Marks (B)	Overall Marks (A+B)
1.	Introduction to AR/VR and MR Development				
2.	Safe Introduction to VR Development				
3.	Advanced AR/VR and MR Development	100	22	24	46
4.	Building Interactive VR Applications				
Maximum Marks		100	Total Marks Obtained		46

Overall Performance*: Pass
Date of Issue: 20th Dec, 2024

Anita Budhiraja
Chief Investigator
Scientist - E
NIELIT Chandigarh

*As per the letter grade tabulated on the back side

FutureSkills PRIME - A MeitY & NASSCOM Digital Skilling Initiative

Government Officials Training -Basic Sample Certificate and Score Card



CERTIFICATE
OF COMPLETION

THIS IS TO CERTIFY THAT

Dr. Poonam
has successfully completed
Government Official Training - Basic
on
Augmented and Virtual Reality
conducted by NIELIT Chandigarh held during
November 4, 2024 to November 13, 2024 as part of FutureSkills PRIME Project.

Anita Budhiraja
Chief Investigator
Scientist - E
NIELIT Chandigarh

Deepak Wasan
Center Head
Executive Director
NIELIT Chandigarh

Date of Issue: 20th Dec, 2024

FSP/GOTB/NIELITCHD/ARVR/CDACPUNE/01/2411/1

FutureSkills PRIME - A MeitY & nasscom Digital Skilling Initiative



SCORE CARD
(GOT-Basic)

Center Name : NIELIT Chandigarh
Course Name : Augmented & Virtual Reality Acceleration

Candidate Name : Dr. Poonam
Certificate Number : FSP/GOTB/NIELITCHD/ARVR/CDACPUNE/01/2411/1
Course Code : FSP/NIELITCHD/ARVR/CDACPUNE/01/GOTB/01

SR No.	Module Name	Max. Marks	Practical Marks (A)	Theoretical Marks (B)	Overall Marks (A+B)
1.	Introduction to AR/VR and MR Development				
2.	Safe Introduction to VR Development				
3.	Advanced AR/VR and MR Development	100	30	24	54
4.	Building Interactive VR Applications				
Maximum Marks		100	Total Marks Obtained		90

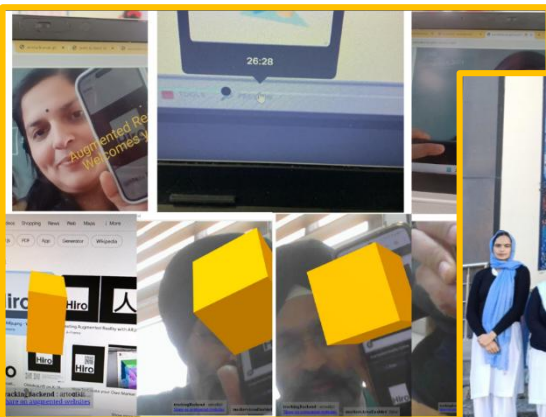
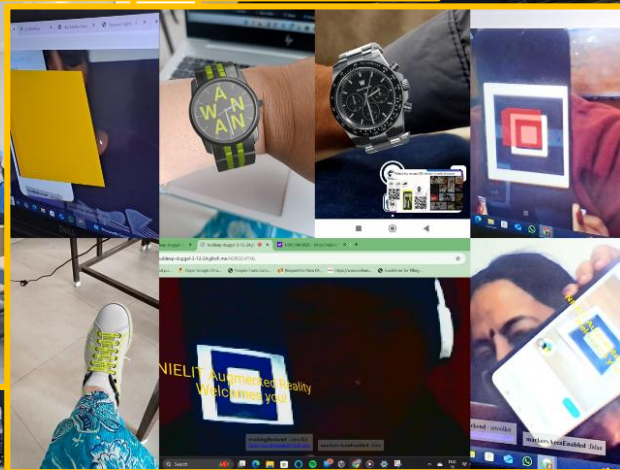
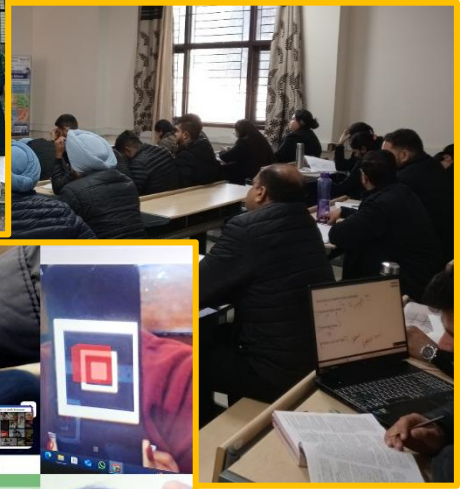
Overall Performance*: Excellent
Date of Issue: 20th Dec, 2024

Anita Budhiraja
Chief Investigator
Scientist - E
NIELIT Chandigarh

*As per the letter grade tabulated on the back side

FutureSkills PRIME - A MeitY & NASSCOM Digital Skilling Initiative

Punjab Police – Bureau of Investigation officials at NIELIT Ropar



Indian Army officials training



Punjab Police officials at NIELIT Ropar



National Institute of Electronics and Information Technology (NIELIT) Ropar

Use of IT for Effective Policing

Training for Punjab Police Officials from 18 November, 2024 to 6 December 2024



First Row	SI Kiranjot Kaur, SI Manmeet Kaur, SI Supanpreet Kaur, SI Tripta Devi, Suman (STO), Sheweta Sharma (Scientist-D), Smt. Anita Budhiraja (Scientist E), Dr. Sarwan Singh (Scientist-D), Sh. Gautam Singhal (AIG), Ritu Kamal (Scientist-D), SI Sarbjit Rani, SI Lovepreet Kaur, SI Heena Rani, SI Kuldeep Kaur, SI Harsimranpartap Kaur
Second Row	Mohd. Adrees (FOC), SI Jyotanjana Kaur, SI Ramanjit Kaur, SI Ramandeep Kaur, SI Kulwinder Kaur Bawa, SI Ritu Rani, SI Kiran, SI Reema Rani, SI Harmandeep Kaur, SI Jyoti, SI Antra Sharma, SI Kamal Preet, SI Mahima Devi, SI Amanjot
Third Row	SI Sahil Kumar, SI Sidharth Choudhary, SI Baljeet Singh, SI Amarjit Singh, SI Gurpreet, SI Tinku Kumar, SI Vinay Kumar, SI Gurbaksh Singh, SI Satwinder Singh Brar, SI Jasvir Singh, SI Gursant Singh, SI Karanpreet Singh Walia, SI Pankaj Sharma, SI Sachindeep Singh, SI Ankush
Fourth Row	SI Yuvraj Sharma, SI Maninder Singh, SI Gagandeep Singh, SI Akashdeep Singh Bhatia, SI Lovepreet Singh, SI Anmol Atwal, SI Aman Kumar Sharma, SI Lovepreet Singh, SI Saajanpreet Singh, SI Sikander Singh Khurl, SI Rajwinder Singh, SI Jaskaran Singh, SI Kanvir Singh



National Institute of Electronics and Information Technology (NIELIT) Ropar

IT for Better Policing

Training for Punjab Police officials (Investigation Officer) from December 09, 2024 to December 14, 2024



First Row	Veerpal Kaur ITA, Harneet Kaur ITA, Krishma ITA, Sonia ITA, Samandeep kaur ITA, Sourav Bansal ITO, Prakash Prateek STO, Snehasis, Dr. Sarwan Singh Scientist-D, Shaweta Sharma Scientist-D, Raminder Singh Scientist-E, Suman STA, Anita Budhiraja Scientist-E, Sanjeev Kumar ITO, Nikshep Paliwal Project Engineer, Lovinish Verma Project Engineer, Gurpreet Kaur ITA, Neha ITA, Ritika ITA, Mandeep Kaur ITA
Second Row	Narinder Kumar ITA, Gaganpreet Singh ITA, Avinash Singh ITA, Raman Kumar ITA, Bhuvan Sharma ITA, Ritesh Singhania ITA, Amritpal Singh ITA, Sheetal Singla ITA, Ginish Duggal ITA, Sukhdeep Singh ITA, Dilpreet Singh ITA, Simranjit Singh ITA, Dilpreet Singh ITA, Manjeet Singh ITA, Ravikant Project Assistant
Third Row	Sukhjeet Singh ITA, Michael Sandhu ITA, Jaspal Singh ITA, Harry ITA, Harjinder Singh ITA, Maninder Singh ITO, Harpinder Singh ITA, Maninder Singh ITA, Kamal Kumar ITA, Rohit Joshi ITA, Jaswinder Kumar ITA, Amrinder Singh Project Assistant

Punjab Police (IT) Bureau of Investigation officials at NIELIT Ropar



National Institute of Electronics and Information Technology (NIELIT) Ropar IT for Better Policing

Training for Punjab Police officials(Investigation Officer) from December 30, 2024 to January 17, 2025



First Row	Nikshep Paliwal(Project Engineer), Shivani Kamra(ITA), Ramanjeet Kumari(ITA), Aashmeen Jammu(ITA), Amanpreet Kaur(ITA), Kamini Bharti(ITA), Dr. Sarwan Singh (Scientist-D), Gautam Singal (AIG Punjab Police), Raminder Singh (Scientist-E), Dr. Sharmistha Bhattacharjee (Scientist-D), Anita Budhiraja (Scientist - E), Rubinderjit Kaur(ITO), Shubhneet Kaur(ITA), Ayusha Sehgal(ITA), Arshdeep Kaur(ITA), Anjani Garg(ITA),
Second Row	Ajit Pal Singh(ITA), Jagdeep Singh(ITO), Harpreet Singh(ITA), Navinder Kumar(ITA), Tek Chand(ITA), Karan Gopal Soni(ITA), Anuj Sharma(ITA), Rakesh Kumar(ITA), Rajat Sharda(ITA), Deepak Mehta(ITA), Krishan Singh(ITA), Ashu Bansal(ITA), Marcus(ITA), Surinder Singh(ITO), Harpal Singh(ITA),



National Institute of Electronics and Information Technology (NIELIT) Ropar IT for Better Policing

Training for Punjab Police officials(Investigation Officer) from January 20, 2025 to February 07, 2025



First Row	Ramandeep Kaur(ITA), Sarabjeet Kaur Bhullar(ITA), Rupinder Kaur(ITA), Navjot Kaur(ITA), Sonia Sharma(ITA), Raminder Singh (Scientist-E), Gautam Singal AIG, Punjab Police, Deepak Wasan Excutive Director NIELIT Ropar , Dr. Sarwan Singh(Scientist-D) , Deepti Bhardwaj(ITA), Jyoti Puri(ITO), Harpreet Kaur(ITA), Anita Kumari(ITA), Navleen Kaur(ITA)
Second Row	Mandeep Singh(ITA), Amit Jain(ITA), Amritpal Singh(ITA), Pawan Kumar(ITA), Sourav Kundrao(ITA), Vishal Singh(ITA), Vinod Agnihotri (ITO), Manjinder Singh(ITO), Ranjeet Singh(ITA), Mandeep Singh(ITA), Sharandeep Singh Rathi(ITA), Jaspreet Singh(ITA), Sarabpreet Singh(ITO), Vinod Chauhan(ITA), Amrinder Singh(Project Assistant)
Third Row	Baljeet Singh(ITA), Ashwani Mehta(ITA), Balkar Singh(ITA), Ashish Dugg(ITA), Harpreet Singh Jeffey(ITA), Rahul Sulakhia(ITA), Ashok Kumar Dhanda(ITA), Manraj Patar(ITO), Bhupinder Singh(ITA), Pirtpal Singh(ITA), Jaskaran Singh(ITA), Amandeep Singh (ITA), GurinderSingh(ITA), Balwinder Singh(ITA)

Punjab Police (IT) Bureau of Investigation officials at NIELIT Ropar



National Institute of Electronics and Information Technology (NIELIT) Ropar Use of IT for Effective Policing

Training for Punjab Police officials from March 03, 2025 to March 21, 2025



First Row	Manjit Kaur (ITA), Pooja Sharma (ITA), Amandeep Mavi (ITA), Shifali (ITA), Dr. Sarwan Singh (Scientist-D), Gautam Singal AIG (Punjab Police Training), Rajni (ITO), Suman Kumari (ITA), Amandeep Kaur (ITA), Rajwinder Kaur (ITA)
Second Row	Zeenat Begam (ITA), Sukhveer Kaur(ITA), Prabhjot Singh (ITA), Amandeep (ITA), Bhupinder Puri (ITA), Rabinder Singh (ITA), Deepak Kumar (ITA), Abhinash Singla (CDFO), Narinder Kaur (ITA), Gurmeet Kaur (ITA)
Third Row	Jaswinder Singh (ITO), Baldeep Singh (ITA), Dapinderjit Singh (ITA), Varinder Singh (ITA), Hardeep Singh (ITA), Baldeep Singh (ITA), Manish Kumar (ITO), Gurpreet Singh (ITA), Dupinderdeep Singh Sandhu (ITA)



National Institute of Electronics and Information Technology (NIELIT) Ropar IT for Better Policing

Training for Punjab Police officials(Investigation Officer) from March 03, 2025 to March 21, 2025



First Row	Darshan Pal(ITA), Kawalvir Singh(ITA), Ashamdeep Singh(ITA), Jagjeet Singh(ITA), Amritpal Singh(ITA), Sahil Sharma(ITA), Anil Kumar(ITA), Neetu Singh(ITA), Balwinder Singh(ITA),Yogesh Kumar(ITA), Harpreet Singh Bror(ITO), Sukhdeep Singh(ITA), Jatinder Singh(ITA)
Second Row	Ravi Kant(Project Assistant), Harpreet Singh(ITA), Amandeep Singh(ITA), Vishant Sharma(ITA), Amandeep Madan(ITA), Brij Mohan(ITA), Honey(ITA), Leepat Kumar Virli(ITA), Sumeet Singh(ITA), Gurpreet Singh(ITA), Manish Dutt(ITA), Gurjot Singh(ITA), Kuldeep Singh(ITA), Lovnish Verm(Project Engineer)
Third Row	Prakash Pratik(STA), Akashdeep Singh(ITA), Gurpreet Kaur(ITA), Ramandeep Kaur(ITA), Dimple Rani(ITA), Shivani Aggarwal(ITO), Gautam Singal(AIG, Punjab Police Training), Neha(ITA), Daljeet Kaur(ITA), Isha Mahajan(ITA), Ekta(ITA), Jaskaran Singh(ITA), Snehashish (Scientist-B)

National Institute of Electronics and Information Technology (NIELIT)

Ministry of Electronics and Information Technology (MeitY),
Government of India

under FutureSkills PRIME scheme

Augmented and Virtual Reality (AVR) BootCamp

80 hours



Contact :

Anita Budhiraja, Scientist - E,

Dr. Sarwan Singh, Scientist - D

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India's Technology Skilling Hub