

Touch & Augmented Reality

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It is one of the latest technologies on which **Microsoft**, **Apple** and **Intel** all are working. In it rather than interacting with computer with help of any interface like mouse or keypad we interact directly with computer which is also known as Natural User Interfacing. At the end of this WORKSHOP students will be able to make their own multi touch pad. So lets the computing begin in a completely new way and step forward into a completely new era of **Motion Sensing & Gesture Computing**.



Course Content

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| <u>Basics of Surface Computing</u> |
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| Introduction |
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| What is Surface computing? |
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| Earlier Prototypes of Surface Computing |
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| Future of Surface Computing |
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| Conclusion |
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| <u>Techniques used in surface Computing</u> |
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| Introduction to Different Techniques |
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| FTIR (Frustrated Total Internal Reflection) |
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| RDI (Rear Diffused Illumination) |
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| FDI (Front Diffused Illumination) |
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| LLP (Laser Light Plane) |
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| DSI (Diffused Surface Illumination) |
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| LED-LP (Light Emitting Diode Laser Plane) |
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| <u>Tracking Your Touch</u> |
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| Software used for tracking your touch |
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| How does it track your touch? |
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| <u>Final Self Made Prototype</u> |
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| Making of a Touch Pad |
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| Working of Touch pad |
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Kinect

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| Introduction to Kinect |
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| Basic Features of Kinect |
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| How it works? |
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| Other hardware devices |
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Image and Pixels

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| Introduction to images |
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| Introduction to Pixels |
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| How images are formed? |
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| What are pixels? |
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| Brief view of Frame rates |
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Open Natural Interface

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| What is Open NI? |
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| Natural User Interface Software Setup |
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| How Open NI Works? |
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| Installation of Open NI |
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Processing

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| Introduction to Processing |
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| • What is processing? |
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| • What are libraries? |
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| Installation Of Libraries |
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Building your first Sketch (Program)

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| <u>Working with Depth Images</u> |
| Occlusion and Depth Shadows |
| Noise at Edges |
| Distortion due to Edges |

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| <u>Motion Sensing Applications</u> |
| Tracking nearest object |
| Controlling your digital world |
| Making a wireless Digital tape |

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| <u>After the workshop, Students learn :</u> |
| How to make their own Touchpad? |
| How to control music with paper? |
| How to convert their Normal Laptop Screen to Touch Screen? |
| How to control laptop with gestures? |

Take away for participants:

Certification:

- Each Participant will get a participation certificate.

Infizeal Toolkit:

- Each participant will get a toolkit containing various software of Touch and Augmented Reality.

Email Support:

- Lifetime Email support

Summer/Winter Training:

- 10% Discount on summer & Winter Training Program by Infizeal Technologies.

Infi-Zeal Technologies:

Corporate Office:

804 Jaina Tower 1
District Center, Janakpuri
New Delhi 110058

www.infizeal.com | info@infizeal.com | +91-847-000-1414.

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