

**Project Title:**

Hand Written Character Recognition Using Neural Network.

**Version:**

1.0

**Description:**

This application extracts text from the image containing handwritten characters and displays them to the user in a .doc/.txt file.

**System Requirement Specifications:**

	<b><u>Windows</u></b>
<b>MATLAB V.13 (R2013a)</b>	<b>Windows7</b>
Processor	Dual core, core2duo, Intel I3
RAM	2GB RAM
DISK Space	Disk space varies depending on size of partition and installation of online help files. The MathWorks Installer will inform you of the hard disk space requirement for your particular partition
Graphics adapter	8-bit graphics adapter and display (for 256 simultaneous colors)
CD-ROM drive	For installation from CD.

**Minimum Requirements**

		<b><u>Windows</u></b>		
	<b>Processor</b>	<b>RAM</b>	<b>DISK Space</b>	<b>Graphics adapter</b>
<b>MATLAB V.13 (R2013a)</b>	Intel I3	2GB	1 GB for MATLAB only, 5 GB for a typical installation	A 32-bit or 64-bit OpenGL capable graphics adapter is strongly recommended

**Recommended Requirements**

The application is built using Matlab 2013a. The student version of this software can be downloaded here

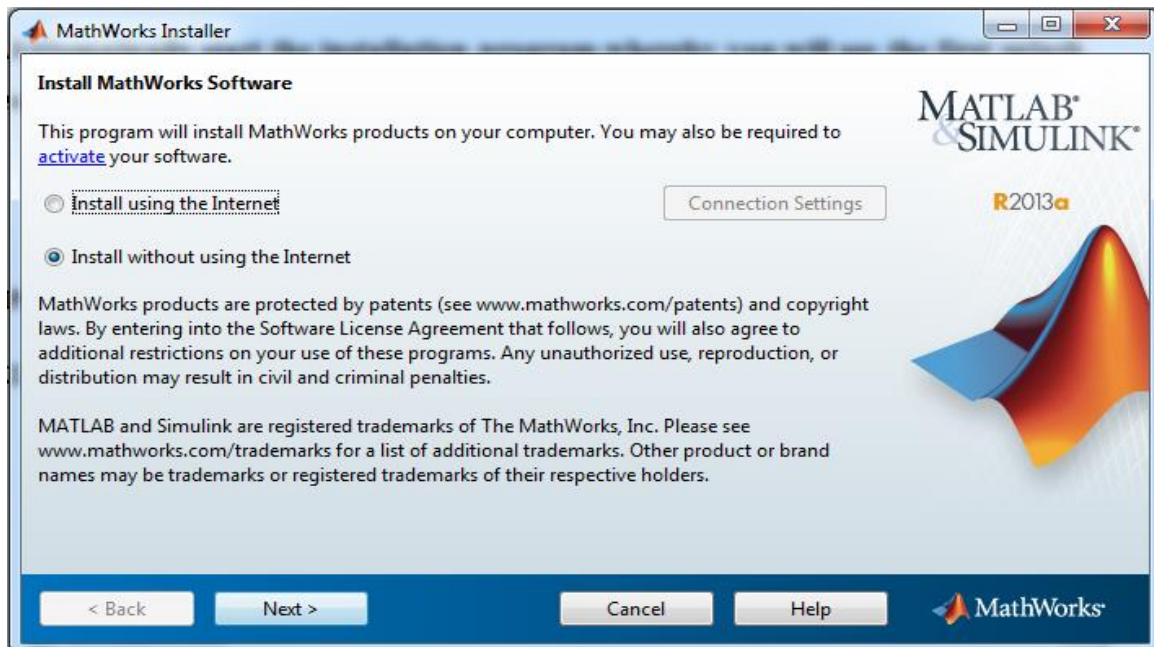
[http://www.mathworks.in/academia/student\\_version/](http://www.mathworks.in/academia/student_version/)

### **Installation Steps:**

#### **Requirements**

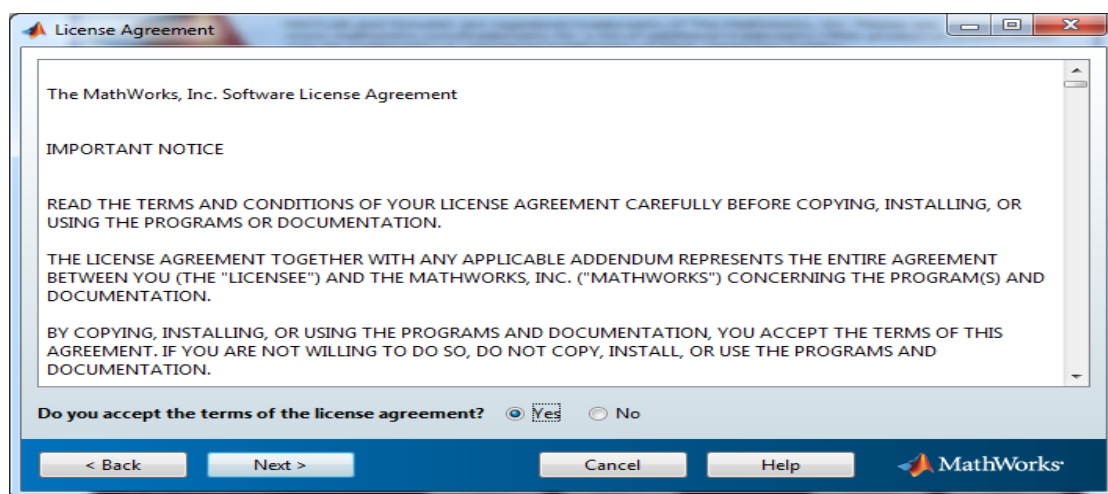
- Internet connection
- A DVD reader Or ISO file
- Matlab media – DVD
- Matlab serial number

1. Load the DVD into the PC you want to install Matlab onto. The DVD should automatically start the installation program whereby you will see the first splash screen.



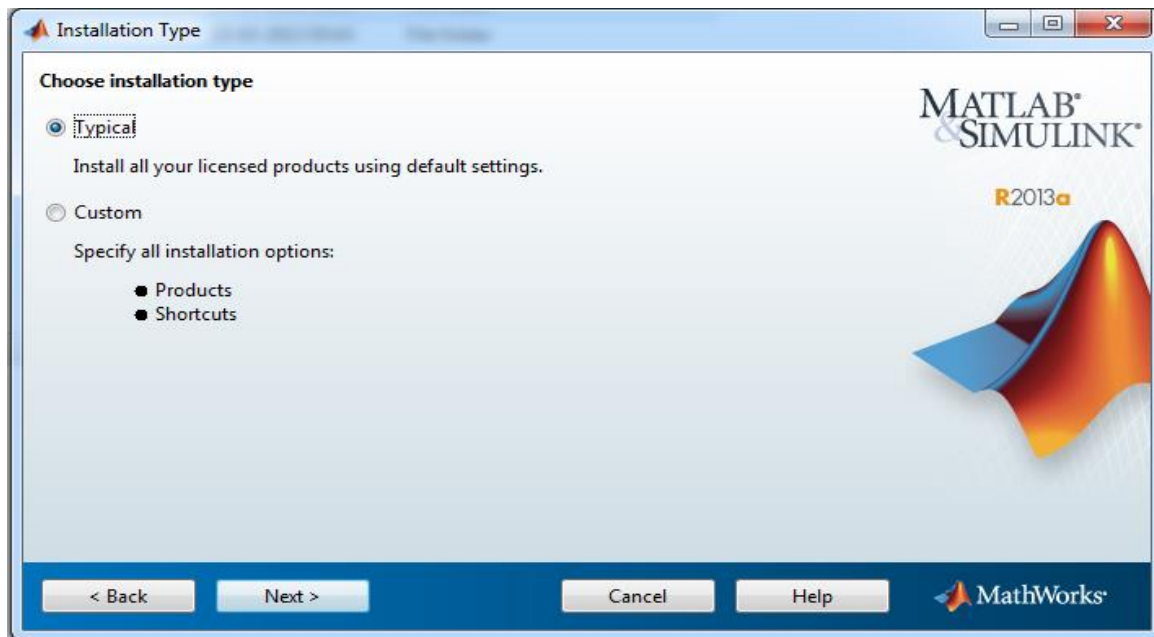
## Setup 1

2. You need to agree to the Math works license.



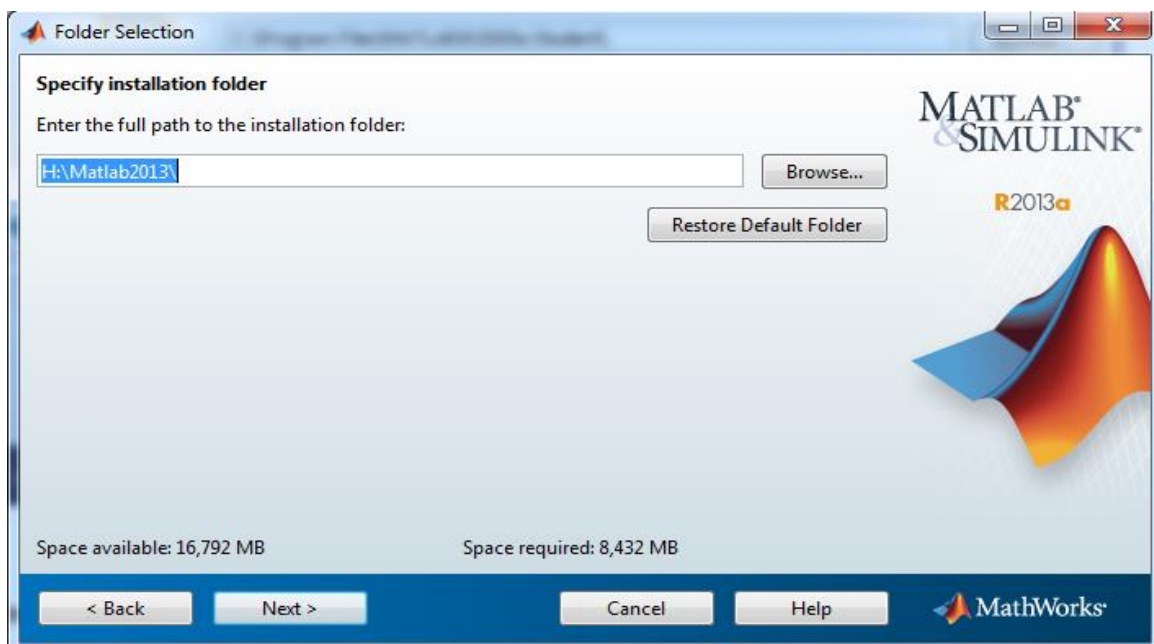
## Setup 2

### 3. Choose the 'Typical' installation



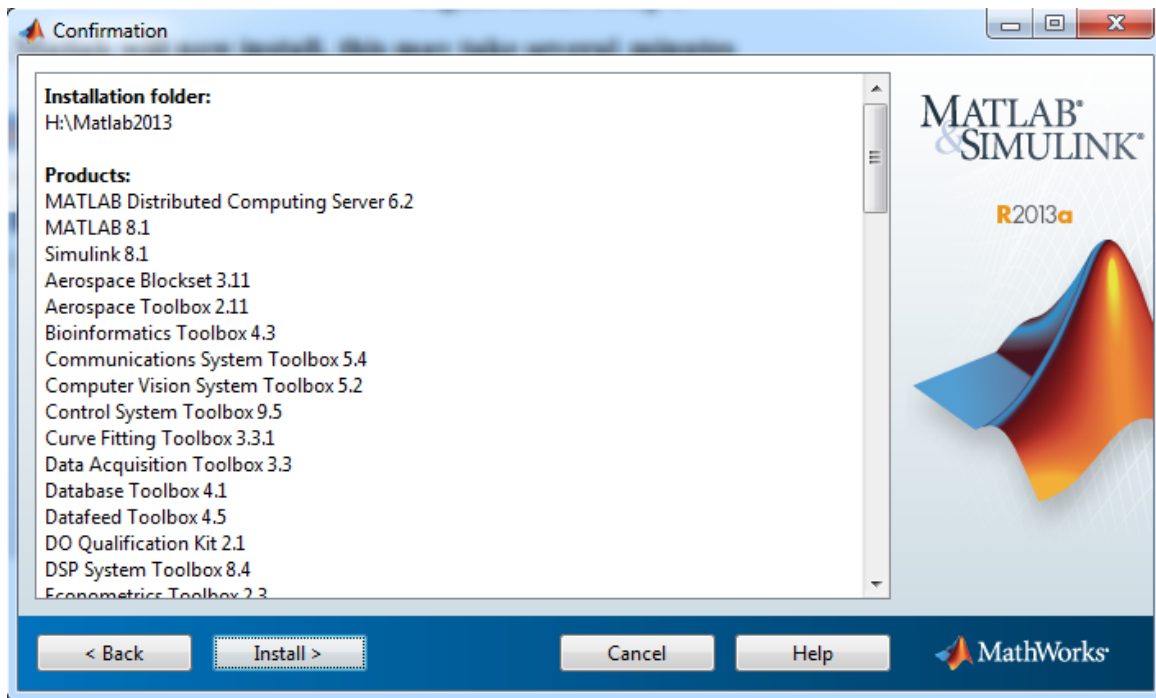
### Setup 3

### 4. Choose the location of the installation.



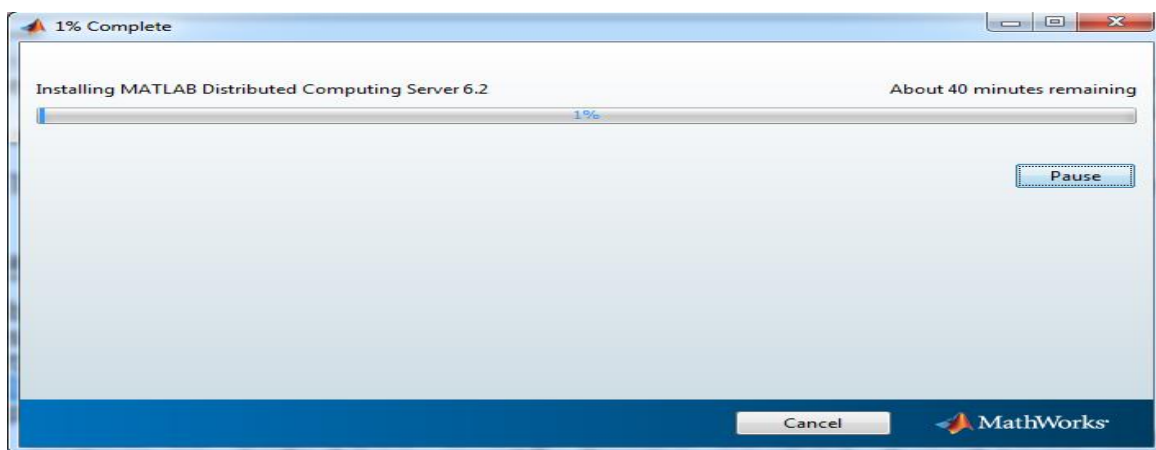
### Setup 4

**5. Confirm the installation settings by clicking on Install**



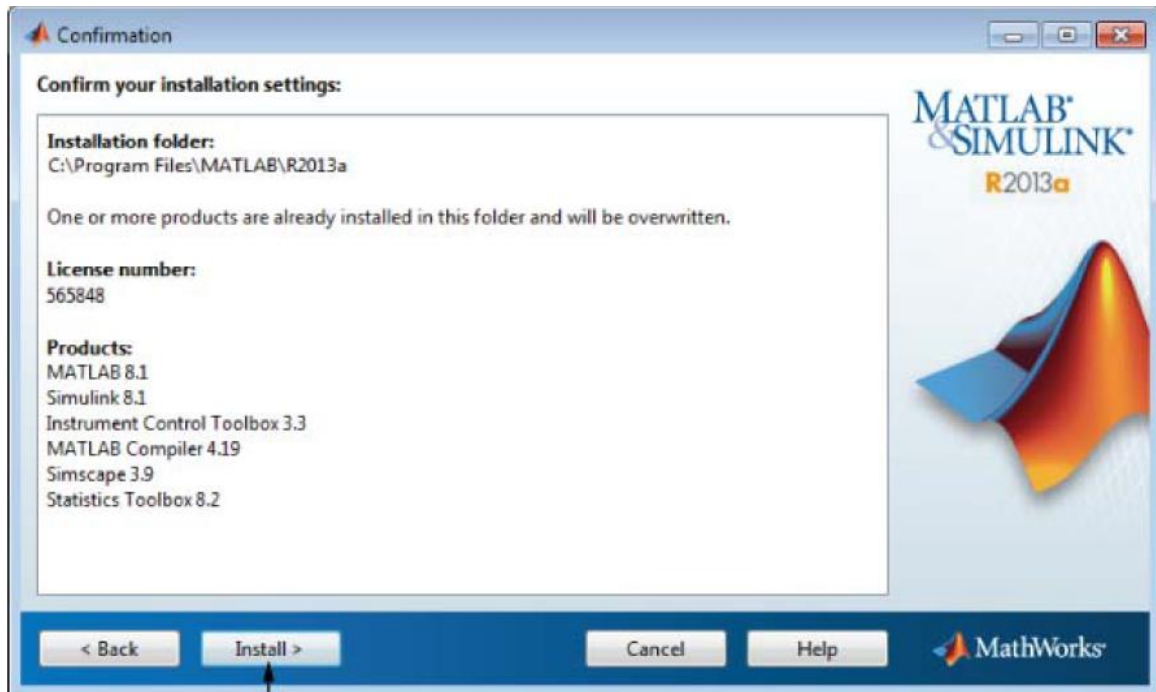
**Setup 5**

**7. Matlab will now install, this may take several minutes**



**Setup 6**

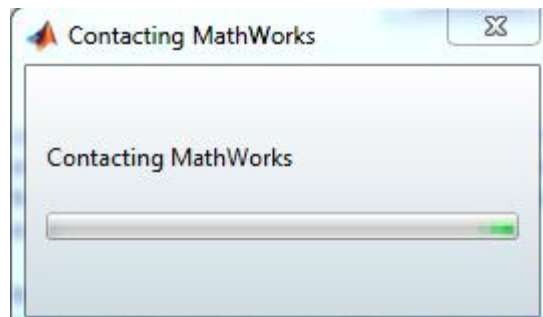
8. After the installation has completed, you then need to activate Matlab.



### Setup 7

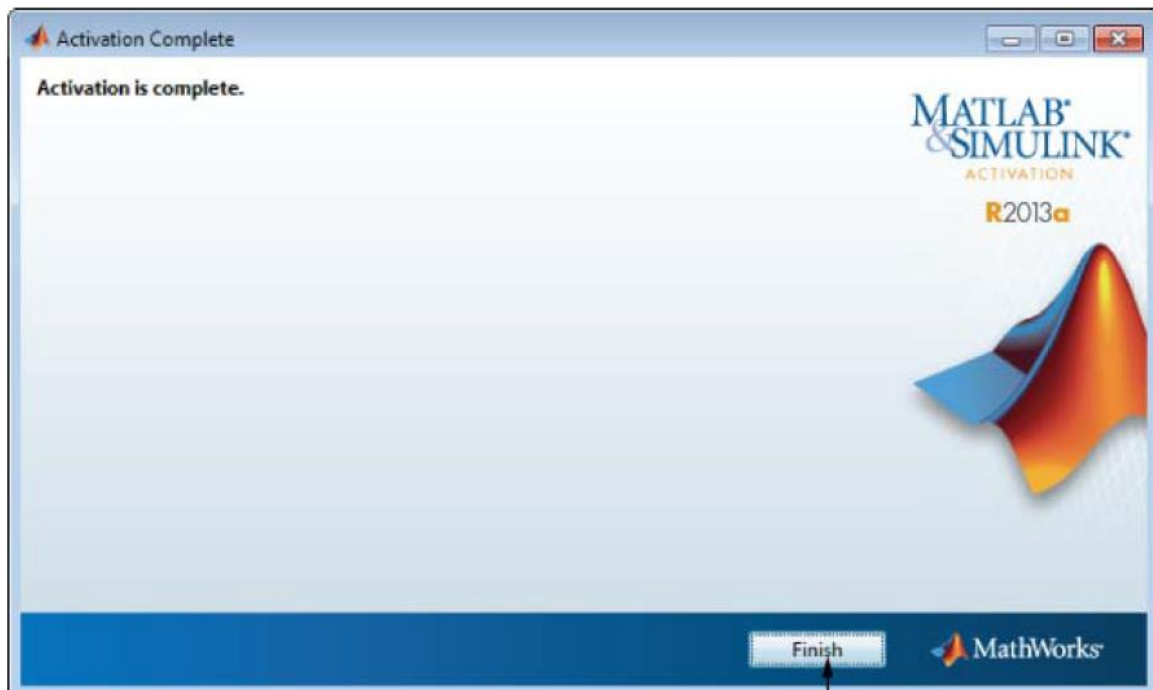
You need to have the serial number ready. This number can be located on the DVD case.

9. Matlab will initially make an internet connection the Mathworks prior to you entering the serial number.



### Setup 8

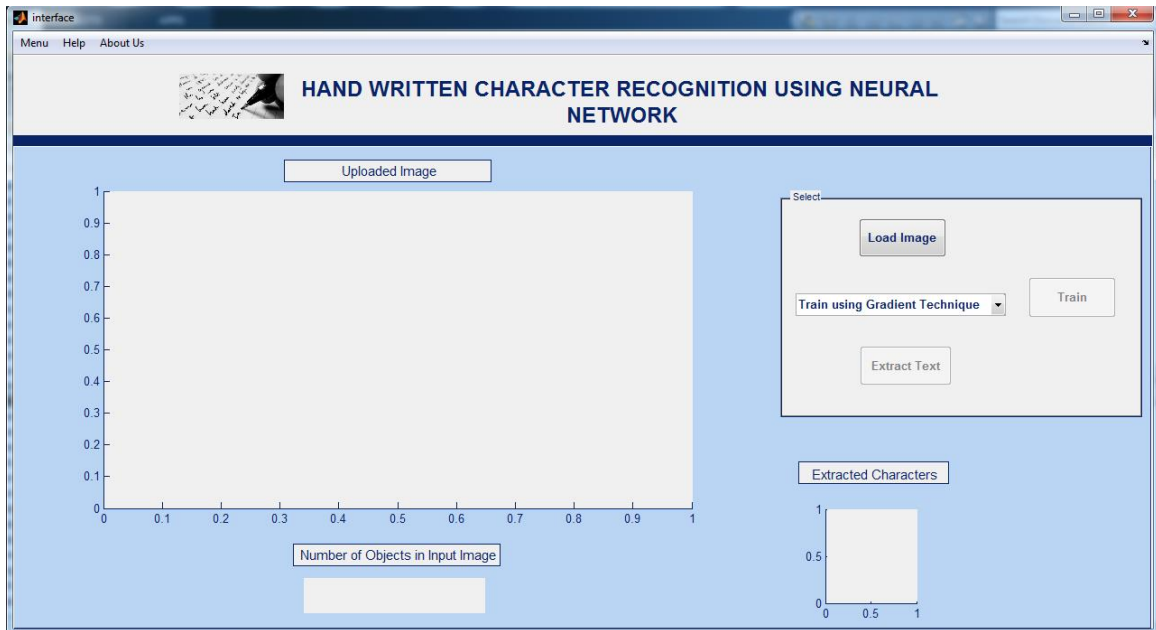
12. Enter the serial number and your @cam email address e.g. ab123@cam.ac.uk and Continue with the rest of the registration process then below figure will appear.



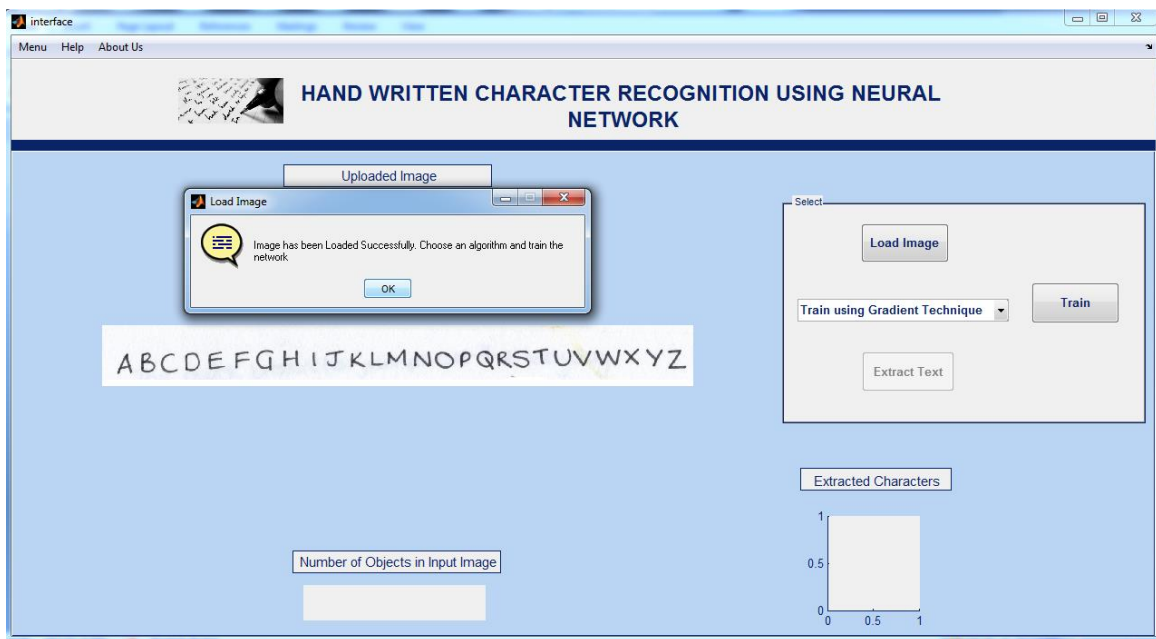
Setup 9

## Running the Project:

Run the interface.m file to get the GUI as shown below:

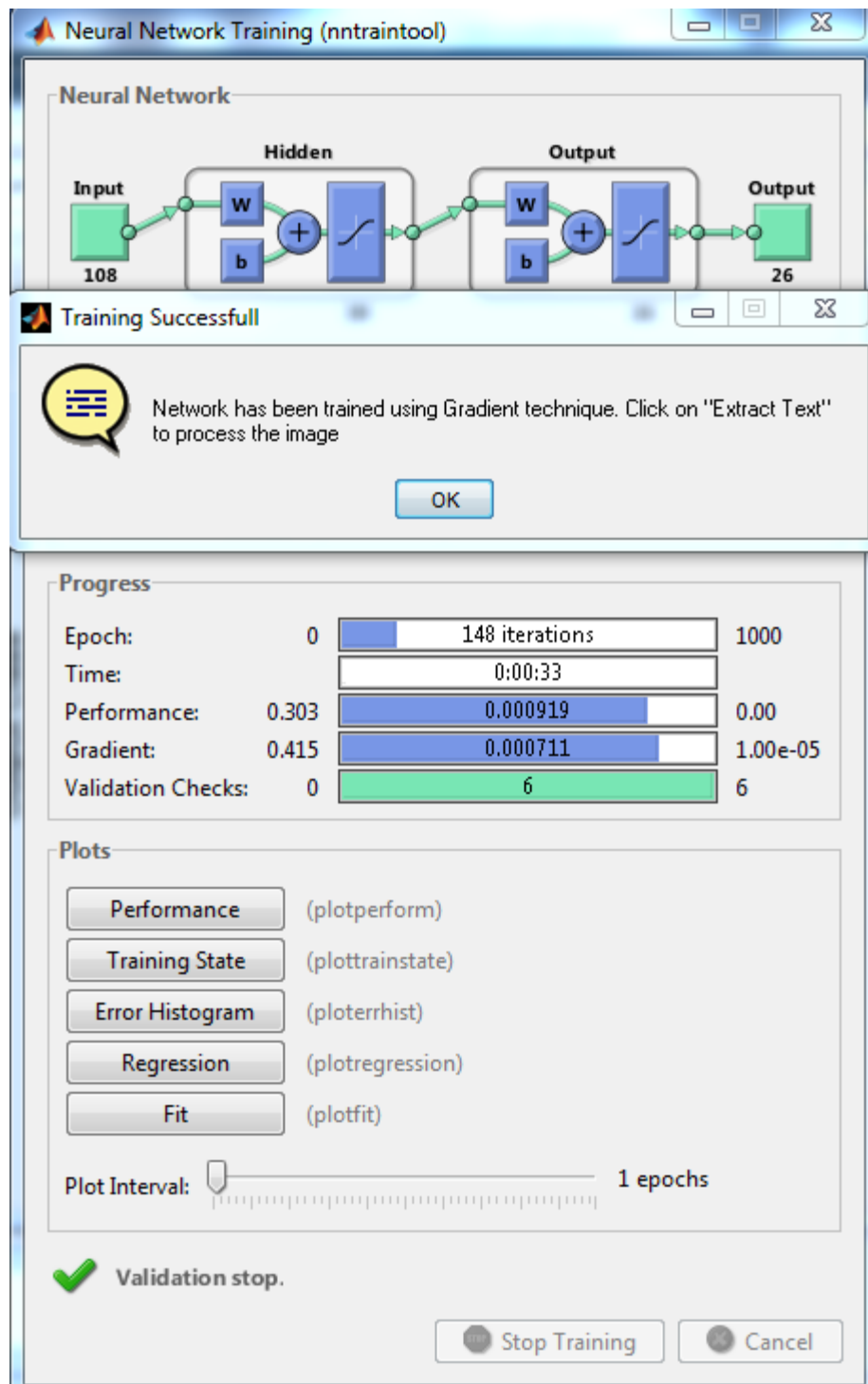


Upload the image containing handwritten characters by clicking on “LOAD IMAGE” button





Once the image is uploaded successfully, Choose the algorithm and train the neural network by clicking on “TRAIN” button



After training, click on “EXTRACT TEXT” button to get the output as shown below

