ENGINEERING THE EYE

DESIGN • DATA • DEPLOY

SRUJANA Center for Innovation

mit media lab

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LVPEI So that all may see
LV Prasad Eye Institute

Congratulations on being selected for Engineering the Eye 2016 !

JULY 3-9

WORKSHOP

9:00 AM SHARP!

Transport

Use the Pushpak bus service and get off at Nagarjuna Circle. From there, a short auto ride to Falcon's Nest and L V Prasad Eye Institute.

Get down at Secunderabad, Lingampally or Hi-Tech city stations if possible. Take an auto or a cab to the accommodation.

Facilities

An entire apartment block for the participants.
A furnished shared serviced apartment within walking distance to the venue. The only thing you need to get is your own toiletries.

Coupons for breakfast, lunch, snacks and dinner will be provided by us to be exchanged for food at the cafeteria. There are also a lot of good places to eat around the venue. However, alcohol is not permitted at the accomodation venue.

Miscellaneous

There are multiple bus routes, so make sure you take the correct one.
Sharing a cab would be cheaper.
If you are arriving late in the night, a cab would be safer.

If you have a good camera, please bring it! Awesome prizes await. If you have a musical instrument ,carry it with you.

The rooms will be shared, so do not carry any valuables apart from laptops.

VENUE

Workshop

Srujana Center for Innovation, LV Prasad Eye Institute
Kallam Anji Reddy Campus ,Rd No. 2, Banjara Hills
Hyderabad.

Accomodation

Falcon's Nest Service Apartments,
Plot No 17, Road Number 2, Banjara Hills, Beside TDP Office,
Hyderabad

CONTACT

Accomodation and directions

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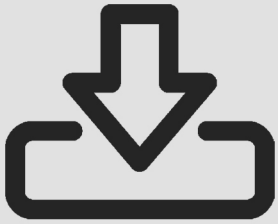
WORKSHOP DETAILS

EYE BASICS

Read up about the eye and optics before the workshop.

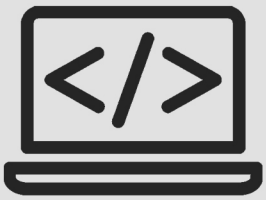


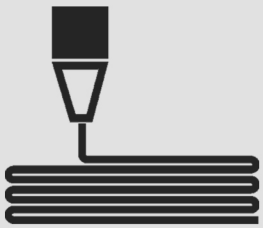
Software Installations

1. Ubuntu Linux and Python: Pip, Numpy, Scipy, Matplotlib
2. OpenCV, Qt, g++, cmake and git
3. Arduino drivers and IDE
4. MATLAB/Octave with image processing toolbox
5. If using a Mac, MacPorts or Homebrew
6. Eclipse with Android SDK/Android Studio
7. 3D printing software such as Cura or UP!
8. Processing
9. R and R Studio

Commands

Familiarize yourself with command line tools like gcc, g++, cmake and apt-get. Git is a versioning system for files and code. Participants are required to create a GitHub ID. Participants will be required to commit their code to a repository on GitHub that will be created specifically for each project.
Please be familiar with creating a git commit and pushing to a remote repository.



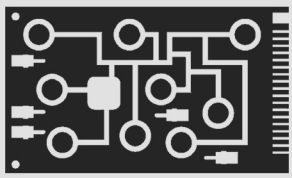


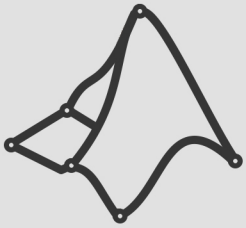
3D Printing

3D printing is especially important for designing intricate components and is an immensely powerful tool for prototyping. Because it allows rapid assembly of material parts, 3D printing is a designer's best friend.
Please do learn basic CAD in SketchUp/SolidWorks/Creo.

Arduino

Arduinos are open-source computer hardware based on a microcontroller. Download the software here. If you don't know already, learn how to hook up an external LED and make it blink.





MATLAB

MATLAB is a powerful general purpose numerical platform that is widely used in Engineering and Scientific disciplines. Please install MATLAB or in case you do not have a licensed copy use it's open source clone Octave.

Please use all licensed softwares as the work done during the workshop might be used for publications. In case you do not have the licensed versions of the aforesaid softwares, please use their appropriate open source counterparts.