

Pallavi A. Raiturkar

4000 SW 37th Blvd, APT 813, Gainesville, FL 32608, USA

Ph: 832-914-8684

Email: pallaviraiturkar@ufl.edu

Objective

To work on a challenging research and development project, with an emphasis on computer vision and human-centered computer graphics.

Education

- **University of Florida, Gainesville, FL**
Ph.D. Student in **Computer Science**, Emphasis in **Human-Centered Computer Graphics** *Spring 2016-ongoing*
GPA **3.88/4**
Advisor: **Dr. Eakta Jain**, <http://jainlab.cise.ufl.edu/>
- **University of Florida, Gainesville, FL**
Masters in **Electrical and Computer Engineering**, Emphasis in **Signals and Systems** *Fall 2014-Fall 2015*
GPA **3.88/4**
Related Coursework: Implementation of DSP, Soft Computing, Speech and Image Processing, Computer Vision
- **National Institute of Technology Karnataka, Surathkal, IN**
Bachelor of Technology in **Electronics and Computer Engineering** *Fall 2010-Fall 2014*
GPA **8.52/10**

Skills

Programming Languages: C, C++, C#, Java, MATLAB, VHDL, Python (basic), Scala, Go, HTML5, CSS, JavaScript

Platforms/Libraries: Unity, Maya, SolidWorks, OpenCV, OpenGL, , HTK Toolkit, Xilinx ISE, PSpice, LABVIEW, PsychToolBox

Work Experience

- **Human-Centered Computer Graphics Lab** *CISE, UFL, USA*
Graduate Research Assistant, Faculty Advisor: Dr. Eakta Jain *July 2015-ongoing*
 - Worked on analyzing eye tracking data on images and videos
- **Digisol Ltd. (Smartlink Network Systems)** *Goa, IN*
Intern, Research and Development *May 2013-July 2013*
 - Worked on developing an integrated Biometric Security and VoIP System for employees
 - Implemented feature extraction from employee dataset; trained model using Neural Networks
- **Tektronix, South Asia** *Surathkal, IN*
Volunteer, Product Development *Oct 2012-Apr 2014*
 - Performed market research surveys amongst client base to seek feedback on customer needs and requirement
 - Designed and developed an embedded Real-Time Biometric Attendance System using ARM9
- **Digisol Ltd. (Smartlink Network Systems)** *Goa, IN*
Intern, Research and Development/ Product Development and Management *May 2012-July 2012*
 - Received intensive training in network device testing and motherboard component assembly

Honors

- Poster titled “Decoupling Light Reflex from Pupillary Dilation to Measure Emotional Arousal in Videos” selected to be presented at the Safe Autonomous Cyber Physical Systems Workshop at Microsoft Research, Seattle, July 2016
- International Student Award for Academic Excellence, March 2015
- Haji C. Saidu Memorial Award for Academic Excellence, May 2010
- Ranked 6th in 15th Gulf Mathematics Olympiad, 2008
- Ranked 8th in University of Waterloo, Canada: Cyber Olympiad, 2007
- Best Speaker, "Toastmasters International Youth Leadership Program", 2006-2008

Project Highlights

Analysis of Eye Tracking Data in Immersive Virtual Environments

- Building VR environments in Unity with C# scripting
- Analysing eye tracking data in virtual reality environments

Dept of CISE, UF
Aug 2016- ongoing

Decoupling Light Reflex from Pupillary Dilation

- Developed model to remove effect of light reflex from pupillary measurements
- Tested light reflex model on emotionally arousing videos

Dept of CISE, UF
Jul 2015- ongoing

Analysis of Eye Tracking Data on Environment Conservation Videos

- Worked with eye tracking data in MATLAB
- Developed and implemented algorithms for analysis of eye tracking data

Dept of CISE, UF
Jul 2015- ongoing

Automated Circuit Designer for Fashion Wearables

- Worked on shape detection using Hough transform and Template matching

Dept of CISE, UF
Aug 2015- Dec 2015

Visual Image Reconstruction from Human Brain Activity

- Evaluated existing techniques for visual image reconstruction using fMRI data
- Implemented image reconstruction using multi-scale local decoders in MATLAB

Dept of ECE, UF
Jan 2015- Apr 2015

Non-Intrusive Real Time Detection of Driver Drowsiness

- Designed a system to detect the fatigue level of drivers using computer vision
- Used Viola-Jones algorithm to detect face, eyes and analyse closed eyes and yawns to detect drowsiness

Dept of ECE, UF
Jan 2015- Apr 2015

Color, Shape and Object Recognition for Child Development

- Developed an integrated software module to recognize basic shapes and colors in a scene in OpenCV
- Combined color and shape detection to detect objects, and compared with existing SURF algorithm

Dept of ECE, UF
Aug 2014- Dec 2014

Handwriting Recognition using Hidden Markov Models (Senior Project)

- Extracted salient features from Telugu and Kanada characters
- Intuitively designed and implemented Hidden Markov Models for word-level recognition using HTK

NITK Surathkal, IN
July 2013- May 2014

Publications

- Pallavi Raiturkar, Andrea Kleinsmith, Andreas Keil, Arunava Banerjee, and Eakta Jain. 2016. Decoupling light reflex from pupillary dilation to measure emotional arousal in videos. In *Proceedings of the ACM Symposium on Applied Perception* (SAP '16). ACM, New York, NY, USA, 89-96.

Posters

- Pallavi Raiturkar, Susan Jacobson, Beida Chen, Kartik Chaturvedi, Isabella Cuba, Andrew Lee, Melissa Franklin, Julian Tolentino, Nia Haynes, Rebecca Soodeen, and Eakta Jain. 2016. Measuring viewers' heart rate response to environment conservation videos. In *Proceedings of the ACM Symposium on Applied Perception* (SAP '16). ACM, New York, NY, USA, 138-138.
- Pallavi Raiturkar, Andrew Lee, and Eakta Jain. 2016. Scan path and movie trailers for implicit annotation of videos. In *Proceedings of the ACM Symposium on Applied Perception* (SAP '16). ACM, New York, NY, USA, 141-141.

Memberships

- Comprehensive Support for STEM Students with Learning Disabilities) Mentor
- Eta Kappa Nu (UF Chapter) Member
- Honor Society of IEEE Member
- IEEE Member
- ACM Member
- Institution of Engineers (NITK Chapter) Member

July 2013- Present
July 2015- Present
April 2016- Present
April 2016- Present
March 2016- Present
May 2011- May 2014

Extra-Curricular Activities

- Completed the 6-week crossfit challenge at Dynasty Crossfit, Gainesville
- Volunteered in teaching Physics, Mathematics and Computer programming to students of Grade 11 and 12
- Volunteered and worked for MAD(Make a Difference), Mangalore Chapter
- Actively participated in the "Save the Earth" campaign organized by IIT Bombay