Haard Panchal

(815) 517-4907 panchalhaard@gmail.com
Website: *h44rd.github.io* Github : *h44rd*

Education

- **Texas A&M University** College Station, Texas
  Master of Science in Visualization (Computer Graphics), Current GPA: 4.0 *Aug. 2019 – Present*
- **International Institute of Information Technology, Hyderabad** Hyderabad, India
  Bachelor of Technology in Computer Science and Engineering (Honors), CGPA 7.62/10 *Aug. 2015 – May 2019*

Experience

- **Software Research and Development Intern** KLA Software India Private Limited
  E-Beam Algorithms Team *May 2018 - July 2018*
  - Developed a robust Deep Learning solution to curtail human supervision for Image Processing task in the pipeline.
  - Surveyed academic literature and existing methods to formulate solution.
  - Prototyped model in Caffe and ported to Tensorflow platform for industrial use. Knowledge of C++ and Python played crucial role.
  - Weekly reviews and presentations to the global team.

Projects

- **Fast Voronoi from Arbitrary number of Seeds *(Linked here)***: Webapp developed to produce Voronoi diagram of an arbitrary number of seeds using WebGL.
  - Follows Object Oriented Paradigm and code style.
  - Application created to generate results for on-going research.
- **Diffuse, Specular, Reflective and Refractive Shading using GLSL *(In Progress)***: Developed WebGL application that performs shading using normal maps.
  - Combines Normal maps with RGB image to create the effects
  - Real time Interactive application
  - Course: Image Synthesis
- **3D OpenGL Game**: Designed and Developed a 3D Interactive game using OpenGL in C++, featuring various moves, camera controls, projections.
  - GLSL shaders implemented to include basic lighting.
  - Course: Computer Graphics
- **Animation From Direct 3D Pose Transfer from Natural Videos Maya Plugin *(In Progress)***: Personal project which uses Deep Learning and AI methods to streamline the process for Animators.
  - Estimates pose of humans in natural videos, without requiring specialized Motion Capture tools.
  - Transfers the movement and pose to a user defined Maya Rig.
  - Automatically creates animation to match the movement of the subject in the video.
- **Effect of Fantasy elements in a Virtual Reality Game**: Developed a VR Table Tennis game in a team to collect and analyse user survey data using *Unity 3D*.
  - Multiple Game modes with varying amount of fantasy effects.
  - Conducted Usability tests and developed iteratively
  - Role: Physics and AI Programmer, Coordinator

Other Relevant Projects

- **Eye Gaze Detection using Attention Modelling**: Built an application that tracks gaze of individuals in images. Implemented and reproduced the results from the Gaze Follow *paper* using the PyTorch framework.
- **Identification and Tracking in Crowds**: Used extracted representations and face recognition to identify individuals in crowds and track them in crowded scenes.

Other Work Experience

- **Teaching Assistant-ship**: Computer Programming, Computer Graphics, Computer Vision and Computing in Visualization II
  - Mentored 7 teams (21 students) for their projects as Computer Vision TA.
  - Organized and conducted OpenGL tutorials and labs.

Eligible to work in the United States with CPT