Debanjan Nandi

debanjan-nandi.github.io | linkedin.com/in/debanjan-nandi/
debanjan.com@gmail.com | nandi.20@osu.edu | +1 614-852-1098

EDUCATION

THE OHIO STATE UNIVERSITY

MS in Computer Science,
Conc in Artificial Intelligence
Aug 2018 | Columbus, OH
Cum. GPA: 3.97/4.0

INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR

M.Tech with Specialization in Visual Information Processing and Embedded Systems
May 2015 | Kharagpur, India
Cum. GPA: 8.63/10.0

B.Tech in Electronics and Electrical Communications Engineering
May 2015 | Kharagpur, India
Cum. GPA: 8.63 / 10.0

COURSEWORK

Graduate
Machine Learning and Statistical Pattern Recognition
Group Studies: Deep Learning: Applications
Computer Vision for HCI
Advanced Artificial Intelligence
Algorithms
Real Time Rendering

SKILLS

Programming Languages
C • C++ • Python • Matlab • Javascript
Libraries
TensorFlow • Keras • OpenCV • Qt • WebGL • PyTorch • Three.js

FILED PATENTS

A system for creating, aligning and visualising 3D views of objects and physical spaces. Application No. 201611016356, 10 May 2016, India

HONORS AND ACTIVITIES

- 2018: Reviewer, **CVPR 2018**
- 2015: Best Outgoing All-Rounder, RP Hall, IIT Kharagpur, India
- 2010-15: Active Member, Formula SAE, IIT Kharagpur.
- 2010: Top 10 in AISSCE-2010, Mamraj Agarwal Award, Governor of WB, India.
- 2008: 99.9 percentile, National Talent Search Examination Fellow, Govt. of India.

EXPERIENCE

GRADUATE RESEARCHER | Computer Vision Lab

Jan 2017 – July 2018 | The Ohio State University, Columbus

- worked with Deep Neural Network, particularly Recurrent Neural Networks, in predicting human sequences/ trajectories.

GRADUATE TEACHING ASSISTANT |

CSE 1222 - Introduction to Programming in C++
Aug 2017 – Dec 2017 | The Ohio State University, Columbus

- Delivered biweekly lectures, oversaw and graded programming labs and held office hours for a class of about 40 students.

3DPHY | Computer Vision (Research Engineer)

July 2015 – July 2016 | Gurgaon, India

- Developed Algorithms to enable seamless 3D visualization and walk-through of apartments or real open spaces.
- Designed, and developed 3DPhy's in-house software incorporating the entire pipeline of 3D content generation from raw 2D data images and data.

DEFENCE R&D ORGANIZATION | Project Intern

May 2013 – June 2013 | Dehradun, India

- Developed, implemented low complexity image interpolation algorithms on FPGA hardware as digital zooming solutions for thermal-sights and reconnaissance at night.

MAJOR PROJECTS

PREDICTING HUMAN TRAJECTORIES WITH LSTM USING AN ADAPTIVE ATTENTION FRAMEWORK

Master's Project | Advisor: Dr. James W. Davis

Abstract : An unprecedented growth in efforts towards building autonomous vehicles and social robots over the last couple of years in human-centric environments has redefined the importance of understanding human behavior. We propose a RNN mixture model augmented with a novel pedestrian weighting scheme to model trajectories of all humans in the crowd. Our integrated attention module has the flexibility to adapt its neighborhood of influence based on the pedestrian's behavior, and it learns the attention from the data itself.

HUMAN POSE-ESTIMATION CONTROLLED MARIO

Course Project

Traditional Mario game uses keyboard input to make the Mario jump, crouch, shoot etc. As a team of 3, we developed a MATLAB based application that takes in web-cam input of a person in real time, estimates the pose of the human as standing / crouching / jumping / shooting using computer vision techniques, and moves the Mario accordingly.

TITLE BLOCK ANALYSIS & RETRIEVAL OF INFORMATION FROM SCANNED ENGINEERING DRAWING IMAGES

Master's Thesis | Advisor: Dr. Jayanta Mukhopadhyay | IIT Kharagpur, India

Sponsored by ARC Document Solutions, India Technology Centre; Developed pre-processing algorithms for text-graphics separation on Title Blocks in Engineering Drawing Documents.