

SIDDHANT JAIN

siddhantjain@cmu.edu | 412-628-7436 | siddhantjain.github.io | www.linkedin.com/in/bluenotebook

EDUCATION

Carnegie Mellon University

MS in Computer Vision | CGPA: 4.06

Expected Graduation: Dec 2018

Birla Institute of Technology and Science, Pilani

BE Computer Science | MSc Economics

August 2010 - June 2015

Undergraduate Thesis: Handling dynamic class boundaries in a classification system

PATENTS

Method and apparatus for real-time matting and despilling using local color estimation and propagation | Issued: 10/10/2017

Creating Personalized Catalogues with Recommendations Embedded in Augmented Viewpoint to Retarget Consumers | Filed 10/31/2016

Removing Overlays from a Screen to Separately Record Screens and Overlays in a Digital Medium Environment | Filed 11/14/2016 (First Inventor)

INTERNSHIPS

DELL EMC | Jan' 15 - June' 15

Built a hybrid cloud monitoring solution for on-premise + AWS/GCloud infrastructure

Adobe Systems | May' 14 - July' 14

Real-time video segmentation fusing motion, color & shape cues for webcam videos

ACADEMIC PROJECTS

One shot learning for video object segmentation using 3D convolutions:

Developed deep learning system in PyTorch employing 3D convolutions to explore transfer learning in the I3D network for video segmentation

Landing Site SLAM for UAVs: Fused semi-direct visual odometry with non-linear ICP to build a full SLAM system for landing zone evaluation for autonomous landing

Data Augmentation using semantic segmentation: Developed a novel data augmentation method for object detection by using semantic segmentation labels, improving classifier accuracy by ~10%

RESEARCH ENGINEERING EXPERIENCE

Adobe Systems, Seattle | Creative Intelligence Lab Intern

MAY 2018 - PRESENT | Creative Intelligence Lab

- Working on building a deep-learning system to perform parametric style transfer
- Wrote custom tensorflow layers in C++ to build an end-to-end learning system by integrating the non-differentiable style renderer into the network
- Building a new dataset by analysing 10k+ movie trailers for extracting datapoints suitable for training

Mentors: Oliver Wang, Kalyan Sunkavalli, Eli Shechtman, Kevin Wampler

Velodyne Lidar, Pittsburgh | Co-Op Student

JAN 2018 - PRESENT | Robotics Institute, CMU

- Developing a point cloud annotation tool with a focus on interactive segmentation of 3D point clouds using a one-shot learning framework for adapting to a wide range of point clouds
- Wrote C++ library providing APIs for manipulating point clouds, extracting deep features and point cloud segmentation

Mentor: Prof. David Held (CMU)

Adobe Systems, Bangalore | Member Of Technical Staff 2

JULY 2015 - AUGUST 2017 | eLearning

- Invented and developed in C++, a real-time background removal system for webcam videos for 2015 release of Adobe Presenter Video Express. (USPTO patent granted)
- Invented and developed an industry first alpha-blending based technique for removing recording cues from screen recordings. (USPTO patent application filed as first inventor)
- Developed a framework for 3D object placement, room scanning in C# to be used in a Hololens language learning game
- Mentored interns on AR application development using Unity and Vuforia for 3D style matching based recommendations

Awards: Innovation Excellence Award, Spot Awards

Tech Transfers: Two projects transferred as marquee features in Adobe Presenter Video Express

PWC, Pittsburgh | Research Assistant

Feb 2018 - May 2018 | Risk & Regulatory Services Innovation Center, CMU

- Implemented the center's theoretical research work on IOT Risk assessment into a fully-functional tool that does automatic risk assessment for IOT threats and recommends effective controls

Mentor: Prof. Bruno Sinopoli (CMU)

Tech Transfers: Invention disclosure filed in tech transfer office, licensing is under review