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Yudhik Agrawal

Education

2016-present   **B.Tech + MS in Computer Science** , *International Institute of Information Technology*, Hyderabad, *CGPA : 8.84* .

2014- 2016   **Senior Secondary**, *CBSE*, DAV Public School, Gurgaon, Haryana.
Percentage: 95.0

2012- 2014   **Senior Secondary**, *CBSE*, Rotary Public School, Gurgaon, Haryana.
CGPA: 10.0

Experience

May-2018 -present   **Research Assistant, Center for Visual Information Technology, IIIT-H**, Currently working under Professor Avinash Sharma, on 3D Shape Analysis using Deep Learning - Reconstruction, Registration, Texture and Clothing Recovery.

May-2018 -present   **Research Student, Robotics Research Center, IIIT-H**, Currently working under Dr. K. Madhava Krishna, on avoiding Drone Collisions by Path Planning after doing 3D reconstruction of the surrounding obstacles(eg. Humans) which need not be static.

Monsoon 2018   **Teaching Assistant, Computer Programming**, The work involves explaining concepts of programming in tutorials and lab sessions for beginners.

Spring 2019-Monson 2020   **Teaching Assistant, Graphics and Digital Signal Analytic and Application**, Involves grading, making problem sets and, taking lectures of a class of 140 students. .

Publications

3DRW'19 ICCVW   **HumanMeshNet: Polygonal Mesh Recovery of Humans**,
We proposed a multi-branch multi-task HumanMeshNet network that simultaneously regress to the template mesh vertices as well as body joint locations from a single monocular image.

Projects

Deep 3D-HM GUI   Developed a Tk GUI toolkit which finds 3D mesh of a human body from a monocular RGB Image/Video using state-of-the-art Deep Learning network.

Stack Overflow UserQuery   Developed a search bar on top of the StackOverflow API which provides more relevant thread results based on the search and also re-order the answers based on various NLP techniques like text-similarity(USE), statistical analysis and semantic analysis.

Amdocs Vidalysis   Developed a Software-as-a-Service which can analyze/interpret the video, trimming relevant part of the video and can also search through video using image or text.

Tic-Tac-Toe Bot   Developed a bot capable of playing advanced version of Extreme Tic-Tac-Toe using alpha beta pruning, custom heuristics and zobrist hashing.

Linux Mini Shell   Developed a Bash like terminal in C using Linux system calls which includes user-defined commands, piping and redirection and signal-handling.

Mini Dropbox	Implemented a threaded HTTP proxy server with LRU caching and mutex locks for multiple clients, implemented using python socket programming.
Other Projects	○ Twitter Sentimental Analysis including WordCloud and HeatMap ○ **Various Games**: Tunnel Rush, League of Zelda(3D), Bomberman ○ **Various Hackathons**: Megathon: Regional TOR, Codefundo: Disaster-Management ○ **Computer Vision**: Image Quilting [SIGGRAPH] and Domain-invariant Image Representations [ICLR]

Achievements

Amdocs'19	Ranked **1st** in the Amdocs HackFest among more than 5000 teams that participated.
Sport Programming	Codechef Handle: yudhik, Rating: **2075**(best). Codeforces Handle: yudhik, Rating: **1743**(best).
Google Kickstart	Secured rank **292** in Round-D 2019 and **326** in Round-E 2019 of Google Kickstart.
Academics	Dean's list awardee for excellence in academics, awarded to top 5% of the batch.
Alexa'18	Ranked **3rd** in the Techgig Alexa CodeGladiator among more than 3000 teams that participated.
JEE-MAINS 2016	Ranked 1285 out of 1.1 million who participated

Relevant Coursework

Computer Science	Statistical Methods in AI, Computer Vision, Data Structures, Optimization Methods, Digital Signal Processing, Graphics, Artificial Intelligence, Computer Programming, Operating Systems, Computer Architecture, IT Workshop, Databases Systems, Mobile Robotics*, Distributed Systems*, System Design and Project, Algorithms, Advanced Computer Networks, Digital Image Processing,
Mathematics	Discrete Mathematics, Graph Theory, Group Theory, Differential Equations, Complex Analysis

* Courses in the current semester

Technical Skills

OS	Linux, Windows
Languages	C, C++, Python, Bash, MATLAB, Java(Basic)
DL Libraries	PyTorch, Tensorflow
Web	HTML, CSS, Javascript, Flask, Django
Others	AWS, Git, MySQL, OpenGL, ROR, Meshlab

Positions of Responsibility

SysAdmin for Research Clusters	Dec'18 - Present
Programming Club Coordinator, IIIT-H	Aug'18 - Present
Felicity: Gordian Knot'18 Problem Setter	Jan'18 - Apr'18
Felicity: Zombie Zone Coordinator	Sept'17 - Apr'18
Student Mentor, IIIT-Hyderabad	Aug'17 - Apr'18