



EDUCATION & SCHOLASTIC ACHIEVEMENTS

Program	Institution	% / CGPA	Year of Completion
B.Tech + M.Tech (Dual Degree) in Engineering Design Specialization : Biomedical Engineering	Indian Institute of Technology Madras, Chennai	7.13/10	2022
XII (CBSE)	Sir Syed English School, Thrissur, Kerala	96%	2016
X (CBSE)	Al Wurood International School	10/10	2014

PROFESSIONAL EXPERIENCE

Elan Learning Labs LLP Business Development & Product Design Intern <i>Dec '18 – Jan '19 May '19 - July '19</i>	<ul style="list-style-type: none">Conducted workshops, met with potential clients, managed all content on company's blog, designed and scripted product information brochures.Designed STEM products in CAD and performed finite element analysis to check failure conditions.Contributed marketing ideas & strategies in expanding brand name through social media marketing.
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COMPETITIONS & PERSONAL PROJECTS

Sudoku puzzle solver using Computer Vision and Object Detection	<i>May'20</i>
<ul style="list-style-type: none">Used object detection to recognize uncontrolled Sudoku images and achieved a test accuracy of 97% over an augmented dataset.Employed standard image processing techniques including adaptive thresholding and perspective warp to extract grid and digits.Coded and solved the puzzle using backtracking algorithm.	
Heart Disease Risk Prediction	Intel Hackfury Competition <i>Sept'19</i>
<ul style="list-style-type: none">Among the finalists chosen to showcase their product at the Grand Finale held at IISC Bangalore.Achieved an F1 score of 0.78 using SVM classifier using appropriate precision-recall weighting based on health symptoms & patient history.	
Semantic Segmentation of Nuclei from Divergent Images	
<ul style="list-style-type: none">Trained deep learning architectures to automate identification of nuclei in any given sample to hasten the diagnosis of genetic diseases	

COURSE PROJECTS

Surgical instrument recognition and calibration for optical tracking system
<ul style="list-style-type: none">Developed and partially tested a low cost, optical tracking system based on binocular vision.Combined with image processing methods and 3D space tracking algorithm, to perform high accuracy of surgical instrument tracking using Stereo Vision Toolbox in MATLAB
Color Sensing Robotic Arm Prototype
<ul style="list-style-type: none">Developed a color sensing module based on variations in photo-resistance to sequential RGB lightCreated a robotic grapppler for picking and placing based on input from the color sensing module

RELEVANT COURSEWORK & SKILLS

Differential Equations	Deep Learning Specialization [1]	Principles of Economics
Fundamentals of Operations Research	Medical Image Analysis*	Geometric Modelling and CAD
Design of Monitoring and Diagnostic Systems	Convolutional Neural Networks[1]	Design of Electronic Systems I (Analog and Digital Systems)
Programming Languages:	Python (OpenCV, Tensorflow, Keras, Pytorch), C, C++	
Web and App Development:	HTML5, CSS, JavaScript, Angular, Ionic	
Software :	MATLAB, ABAQUS, Autodesk (Inventor, AutoCAD, Fusion360) MS-Office (PowerPoint, Excel, Word)	

POSITIONS OF RESPONSIBILITY

President Toastmasters Club <i>2013- 2014</i>	<ul style="list-style-type: none">Spearheaded the Youth Leadership Program, a public speaking international venture under Toastmasters International with over 50 members and volunteers.Conducted weekly meetings, bi-monthly competitions and workshops on public speaking and communication.
Assistant Head - SMILE Charitable Trust <i>2017- Present</i>	<ul style="list-style-type: none">Private Funded Charitable Trust for empowering and educating girls from financially challenged families.Financially supporting 10 families in need and providing necessities on a monthly basis.
Coordinator Centre for Innovation <i>Team Sahaay 2019</i>	<ul style="list-style-type: none">Led the team project on Biomedical Waste Management and built a completely mechanical Sanibin in a span of two months under the Social Innovation Club.Presented the prototype at Open House 2019 and gained recognition in various print media including The Hindu
Coordinator Placement Team <i>IIT Madras 2019</i>	<ul style="list-style-type: none">Handled institute placement logistics during tests, talks, GDs and interviews for allotted companiesReached out to 60+ core companies in biomedical industry for recruitment drive.

EXTRA-CURRICULAR ACTIVITIES

<ul style="list-style-type: none">Online tutor teaching students of grades 6 to 12 in science and math on two platforms since 2017.Member of IIT Madras Volleyball Team 2018 and represented in Jimmy George Volleyball Tournament!Member of Cauvery Football Team and won the Schroeter (Inter-hostel sports championship) 2017Candidate of Mock United Nations Conference 2013-15, Peevees Group of Schools
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