

Shreyas Kanjalkar

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EDUCATION

- **Worcester Polytechnic Institute** Worcester, MA
Master of Science, Robotics; GPA: 4.00/4.00 Aug 21 - May 23
- **Manipal Institute of Technology** Manipal, India
Bachelor of Mechanical Engineer; GPA: 8.26/10.00 Aug 16 - May 20

PAPER PUBLICATION

- **Quantitative Haemodynamic Study in Renal Artery Bifurcation using Computational Fluid Dynamics:**
P.Hegde, S. Kanjalkar, S.M. Shah, G.B. Shenoy, B. R. Pai, M. Tamagawa, R. Prabhu, D. Shrikanth Rao;
Journal of Engineering Science and Technology 21 [pdf](#)
 - Designed and analyzed blood flow simulation in humans, which can help doctors visualize the intricacies of the patient
 - Presented the paper at **Global Conference on “Advanced Smart and Sustainable Technologies in Engineering 20**

INDUSTRY EXPERIENCE

- **Wipro PARI — Robot and Automation Design Engineer Intern:** Summer 22
 - Designed and drafted Pallet and Wall Mounting Bracket used in Tower Parking System to allow up to 64 vehicles to park in the space of 3 using SolidEdge software
- **Force Motors Pvt. Ltd — Research and Design Engineer Intern:** Summer 19
 - Developed prototype routing of fuel and exhaust system pipe for a MUV using CATIA V5

RELEVANT COURSES

- Computer Vision, Algorithms: Design and Analysis, Data Structures, Motion Planning, Artificial Intelligence, Robot Dynamics and Control, Project Management

ACADEMIC PROJECTS

- **Panorama stitching of images using Classical and Deep Learning:** Fall 22 [pdf](#)
 - Implemented corner feature detections using RANSAC on COCO image data set and stitched images
 - Created a supervised and unsupervised neural network to estimate homography for different view points of an image
- **Probabilistic Edge Detection using Classical and Deep Learning:** Fall 22 [pdf](#)
 - Implemented the edge detection on the CIFAR-10 image data set and compared it with the classical Canny and Sobel Edge detection
 - Used ResNET and DenseNET neural networks to do image prediction on the CIFAR-10 image data set
- **Optimal Watchman Route in an unknown environment:** Spring 22 [github](#)
 - Found static location of cameras to guard all the edges of the environment at all times
 - Constructed a walking path for a robot to follow to monitor the edges of the environment in minimum time
- **Joint Space PID Control of Manipulator Robot:** Fall 21 [github](#)
 - Implemented inverse kinematics and a PID controller to track desired trajectory of the tool mounted on robot
 - Simulated a RRP Manipulator robot in Gazebo simulation
- **Manipal Institute of Technology: Computational Fluid Dynamics — Analysis of blood flow in humans** Fall 19 - Spring 20
 - Designed a simulator for blood flow through abdominal aorta-renal artery junction using CATIA and ANSYS software
 - Found results which showed that increase in angle between aorta and renal artery affected blood flow behaviour

TECHNICAL SKILLS

- **Languages:** Python, Pytorch, C++, SQL, DL, OpenCV, ROS
- **Tools:** AutoCAD, ANSYS, CATIA, MATLAB

HONORS AND AWARDS

- Event Head at Technical and Cultural festivals conducted at Manipal Institute of Technology
- Winner of Open Chess Tournament at Manipal Institute of Technology
- Served as the General Secretary of MIT Gaming in 2018-19