RADHIKA AMAR DESAI

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Objective

As an ambitious student deeply passionate about robotics, particularly computer vision (medical and underwater imaging) and process automation, I am actively seeking opportunities to contribute to transformative research and innovation in these fields. My enthusiasm lies in designing, analyzing, and testing cutting-edge deep learning architectures and computer vision algorithms. I am dedicated to leveraging my skills to drive advancements in robotics and vision technologies, fostering impactful solutions for the future.

Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. (CSE)	VIT, Chennai	9.12/10	2022-Present
Senior Secondary Certificate	CBSE Board	96.4%	2022

Internships

- **Schneider Electric** *May 2024 - Jul 2024*
  Project Trainee Doha, Qatar
  – Training in Emergency Shutdown Systems (Triconex) and Distributed Control Systems (Foxboro).
  – Developed automation tools for testing communication between Triconex and Foxboro systems.
  – Developed automation tools for preprocessing data obtained from Foxboro controllers.
  – Assisted in the Factory Acceptance Test for the Triconex upgrade project.

- **Pledge A Smile Foundation** *August 2024 - September 2024*
  Summer Intern (Upcoming) Remote
  – Tasked with expanding the foundation's reach and raising funds through targeted initiatives and outreach strategies.

Research Projects

- **Automatic PCOS Detection System using Ultrasound Images of Ovaries** *Jun '23 - Present*
  Paper Submitted to Computer Vision And Image Processing Conference and is pending acceptance.
  – Detects PCOS based on the presence of follicles in ultrasound images of ovaries using computer vision and machine learning with 99 % accuracy.
  – Introduces a novel "Salt Segmentation" technique for binarization of ultrasound images, which are characterized by low contrast and prominent noise.
  – Repository: https://github.com/Radhika-Amar-Desai/Automatic_PCOS_Detection_Using_Ultrasound_images.git

Projects

- **Segmentation of Skin Lesion** *Dec '23 - Apr '24*
  Developed a fusion technique for U-net models, achieving a 20% higher IoU score than individual models.
  – Repository: https://github.com/Radhika-Amar-Desai/modified_unet_for_skin_lesion.git

- **Surgical Tool Segmentation** *Apr '24*
  Segments six surgical tools from given images with an average IoU score of 0.95.
  – Utilizes an ensemble model consisting of six U-Nets, each trained to segment a specific class, with the outputs combined to produce the final segmentation result.
  – Repository: https://github.com/Radhika-Amar-Desai/SurgicalToolsSegmentation.git

Technical Skills

- **Programming:** C, C++, Python, ROS, Arduino, HTML, CSS, Visual Basic, TriStation software, FoxView software

Communities

- **Google WE Program:** Selected as one of the top 200 students nationwide for the Google WE Program Cohort 5.
- **Dreadnought Robotics:** Member of Dreadnought Robotics.

Referrals

- **WE Mentor:** aruvi@talentsprint.com
- **VIT Research Faculty:** chanthini.baskar@vit.ac.in
- **Schneider Electric Project Manager:** ritwik.bhattacharjee@se.com