

RUTWIK JAYANT PALASKAR

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SUMMARY

Interested in interdisciplinary research combining Machine Learning, Healthcare and Bioengineering.

EDUCATION

MIT ADT University, Pune, IN	2018 - Current
B.Tech. Bioengineering	8.38/10

ENTREPRENEURSHIP

Prosthocentric Pvt Ltd	<i>Founder Director</i>	Since 2019
We are developing innovative medical devices based on granted patents from the United States of America (USA), European Union (EU), France, Germany, United Kingdom and Finland		

GRANT

Our start-up Prosthocentric Pvt Ltd received funding of Rs.50,00,000/- from Biotechnology Industry Research Assistance Council (BIRAC), Government of India for early development of innovative medical devices.

PUBLICATIONS

1. **Rutwik Palaskar**, Renu Vyas, Vilas Khedekar, Sangeeta Palaskar and Pranjal Sahu, "Transfer Learning for Oral Cancer Detection using Microscopic Images", Under Review
2. Shreyas Patil, Mihir Kulkarni, Shubham Hajare, Tanvi Parkhe, **Rutwik Palaskar**, Diksha Zutshi, Reema Shyamsunder Shukla, Sameer Desai, "Assistive Device for Hemiplegic Patients", *3D Printing*, Book Chapter

PROJECTS

Shwaas: Social Distance Tracking and Health Monitoring App
iBase Electrosoft LLP, Virtual March 2021

- An App that ensures social distancing during the Covid 19 pandemic where recording a person's temperature and O2 saturation can be noted by just scanning a QR code.
- Reducing contact and decreasing the chances of the virus spread.
- [View Project](#)

Transfer Learning for Oral Cancer Detection using Microscopic Images
Research Assistant, MIT ADT University Oct 2020

- Worked with doctors at a hospital in Pune to collect one of the first datasets of microscopic images for oral cancer detection
- Applied current state-of-the-art models of transfer learning for image classification
- [Technical Report](#)

Predicting Urinary Incontinence in Elderly

Medhacks Hackathon, Johns Hopkins School of Medicine

Oct 2020

- Built an assistive technology for the elderly to predict urinary incontinence
- [View Project](#)

Collection and Utilization of Single-Use Plastics and Various Other Industrial Wastes

Smart India Hackathon

Oct 2019 - Jul 2020

- Built a sustainable solid waste management system
- Developed an online B2B e-commerce service for buying and selling of single-use plastics and various types of industrial wastes
- Developed machine learning algorithms for real-time waste classification to segregate waste
- [View Project](#)

Advanced Arduino

Venture Centre, Pune

Oct 2019

- Worked with multiple sensors and output devices

INTERNSHIPS

University of Pennsylvania

Intern

June 2021 - Current

- Kidney Tumor Segmentation
- Automating the process of identifying kidney tumors and saving time and effort of radiologists and surgeons

Stony Brook University

Part-Time Intern

Oct 2020 - May 2021

- Cardiac Image Segmentation for generalization over multi-site data using histogram matching augmentation
- Extending histogram matching augmentation for generalization of machine learning models for Oral Cancer Detection

Tech Smart Systems

Data Science Intern

Mar 2019 - Apr 2019

- Trained machine learning models for classification and regression tasks on in-house housing prices dataset.
- Applied data pre-processing and machine learning techniques on real-life housing prices data.
- Learned about Pandas, NumPy, Matplotlib, and Sci-Kit learn libraries in Python.

SKILLS

Platforms TensorFlow, PyTorch, Keras, Arduino, Django, Flask, Web Development

Programming Languages Python, Java, C, C++, HTML, CSS

RELEVANT COURSES

MIT ADT C, Java, Advanced Java, Machine Learning, Python, Data Mining and Warehousing, Microcontrollers and Bioelectronics, Electrical engineering, Electronics, Genomics, Microbiology, Biostatistics, Genetics, Molecular Biology, Biochemistry, Biochemical Engineering

MOOCs Machine Learning (Andrew Ng, Coursera, Stanford University), Machine Learning A-Z: Hands-on Python and R in Data Science (Udemy), C programming for beginners - Master the C Language (Udemy), Deep Learning A-Z (Udemy), TensorFlow 2.0 (Udemy), Python Programming Master Class (Udemy), Full Stack Django Web Dev (Udemy)

HONORS AND PARTICIPATION

Smart India Hackathon, Finalist	2020
Represented my university at the all-India level in this hackathon	
Class Representative	2019-2020
A mediator between students and teachers for communicating student welfare issues to the administration department.	
Team Player Award	2019
Dedication to Social Causes by Odser Charitable Trust, Pune	
Certificate of Appreciation as a Photographer	2019
Flame Model United Nations, Pune	
Secured 1st Position	2015
Carmelvenza - a Science Quiz Competition held at Mount Carmel School, Pune	
Secured 2nd Position	2015
Mental Math Competition in school, Pune	
Certificate of Participation	2015
Interschool Street Play Competition, Pune	
Certificate of Participation	2015
Interschool Creative Contest as a part of Independence Day celebration at Amanora School, Pune	
Certificate of Appreciation	2015
Demonstrating responsibility as caretaker and true friends of trees, forest and Mother Earth on International Earth Day at Anand Van Forest, Pune	
Secured 2nd Position	2014
Interschool Science Exhibition, Science Expo	
Secured 1st Position	2014
Football Competition	
Secured 2nd Position	2014
Obstacle race competition	
Secured 3rd Position	2014
100 meters running competition	
Sports Captain	2014-2015
Participated in 11th National Science Olympiad	2009

OUTREACH

Fundraising Team Lead	Odser NGO, Pune
Sambandh Project Co-ordinator	Prem Niwas Old Age Home, Pune

SPORTS

Represented my school at the State level in football and basketball and also our Bioengineering department at Inter-College competitions in football, basketball, and table tennis.