RUTWIK 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

PUBLICATIONS

1. **Rutwik Palaskar**, Renu Vyas, Vilas Khedekar, Sangeeta Palaskar and Pranjal Sahu, "Transfer Learning for 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.
- Represented my university in this national-level hackathon
- 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

Prosthocentric   *Part-Time Intern*   Nov 2019 - May 2020
- Product design and development - Prosthocentric develops and builds automated temporomandibular jaw-relation records to aid and assist dentists in designing dentures.
- Prosthocentric research has been awarded USA and EU patents, and Rs. 50,00,000 grant from the Government of India to develop these devices.
- https://prosthocentric.com

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

Smart India Hackathon, Finalist   2020

Class Representative   2019-2020
A mediator between students and teachers for communicating student welfare issues to the administration department.

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.