Pratik Katte

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WORK EXPERIENCE

Senior Research Engineer, Niramai Health Analytix, Bangalore, India *Jan 2020 – Present*

- Was responsible for developing a machine learning based algorithms for a desktop application to help technicians efficiently capture breast thermal images for cancer screening.
- Played a lead role in developing an AI based desktop application that screens people to detect COVID-19 symptoms such as fever and breath rate and compels people to follow COVID-19 protocol. The application screened 1M+ people across India.
- Worked on training a U-Net based deep learning model for the task of lung segmentation in chest X-ray images as part of the Xray Setu Project. This work significantly improved the AUC of the lung abnormality classifier.
- Awards: "On Spot Award" for the performance on Niramai Fever Test. "Working beyond boundaries Award" for the performance on chatbot.

Data Science Intern, L.V. Prasad Eye Institute, Hyderabad, India *Jun 2018 – Aug 2018*

- Designed and developed a conversational chatbot to streamline booking appointments with a doctor and educate patients about eye diseases. Deployed on a website serving more than 4500 visitors per day.
- Developed a data syncing service between the pupil-plus device and server to facilitate doctors' access to patient information.

Data Science Intern, Prakshep, Bangalore, India *Jun 2017 – Jan 2018*

- Developed a Geographic Information System using GeoServer and GDAL Python library for working with geospatial data related to crop harvests for farmers to make informed decision in selecting the seed for subsequent yield.

Project Intern, Xerox Research Center India, Delhi, India *Jun 2016 – Jul 2016*

- The projects' objective was to develop an educational platform for students in poor states in India for better access to education. Developed textual, video lectures, designed the whole curriculum and course schedule for the subject "Programming with C++".

EDUCATION

University of Mumbai, Mumbai, India *Jun 2015*

Bachelor in Engineering, Information Technology

Relevant Coursework: Intelligent System, Image Processing, Computer Graphics and Virtual Reality, Big Data Analytics

PUBLICATIONS

Pratik K., SivaTeja K., et al. 'Automated Thermal Screening for COVID-19 using Machine Learning.' in AIIMA, MICCAI Workshop'22.

Sabyasachi S., Pratik K., et. al. 'Abstract: Diagnosing COVID-19 From Images of Chest X-rays Communicated Via WhatsApp.' UKIO Congress (2022).

Patil, Vivek, Pratik Katte, and Abhay Patil. 'Restoration of Images Using Only Noisy Data.' International Journal of Research and Analytical Reviews (IJRAR) 6.1 (2019).

PROJECTS

Digital Exophthalmometer *Jun 2018 – Jul 2019*

- The project intended to digitize the traditional instrument used by an optometrist to measure the eye's forward displacement for Exophthalmos. We designed a 3D printed working prototype that uses a NIR camera to capture an image. Developed an algorithm using k-means clustering to detect an iris used pixel per millimeter ratio to measure the protrusion of an eye.

Iris Based Attendance Management System *Dec 2016 – Feb 2017*

- Led a team of 5, designed and developed an iris based attendance management system for Ministry of Rural Development, Government of India. I was responsible for implementing an algorithm proposed by J. Daugman for iris recognition in Python.

CONFERENCE TALKS

- 'Niramai Fever Test: Automated Screening for COVID Symptoms', Wolfram Technology Conference – 2021
- 'Machine learning for COVID-19 detection', Data Science Conference, Europe – 2021

TECHNICAL SKILLS

- Programming Languages: Python, NodeJS, ReactJS, C++, C#.
- Frameworks/Libraries: TensorFlow, PyTorch, Keras, Django, WPF