**VATSAL NANDA**

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EDUCATION

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| --- | --- | --- |
| **Thapar Institute of Engineering and Technology** | Aug. 2019 | – May 2023 |
| Bachelor of Technology in Computer Science | CGPA-9.47/10 Till 4th semester | Patiala, Punjab, India | |
| **Springdales School** | May 2017 | – May 2019 |
| Intermediate | Overall Percentage 94.34% | Central Board of Secondary Education | New Delhi, Delhi | |
| **Springdales School** | May 2005 | – May 2017 |
| Matriculation | 10 CGPA | Central Board of Secondary Education | New Delhi, Delhi | |
| RESEARCH/INTERNSHIP EXPERIENCE |  |  |
| **Research Intern** | May 2021 – Present | |
| Indian Institute of Technology(IIT) |  | Indore, India |

* Currently Working on **Twin SVM Clustering** technique of Machine Learning under the guidance of Dr. M.Tanveer.

**Undergraduate Student Researcher**

October 2020 – Present

University of Cincinnati

Ohio, USA

* Currently reviewing various deep learning models for medical image denoising like X-Ray, CT-Scan, MRI, OCT, etc. We evaluated various algorithms by employing various datasets and evaluating the qualitative and quantitative results. This is an ongoing project under Dr.Surya Prasath

**Undergraduate Student Researcher**

August 2020 – March 2021

Thapar Institute of Engineering and Technology

Patiala, Punjab, India

* Wrote a book chapter on the topic-”Salt and Pepper Noise Removal Techniques for Medical Image Reconstruction” for AIMIA2020.This was done under the guidance of Dr. Prashant Singh Rana and Dr.Bharat Garg. **The chapter has been accepted for publishing.**
* We analysed various algorithms, implemented them on MATLAB and calculated qualitative and quantitative parameters like PSNR, SSIM, etc.

PROJECTS

**Projects using Python and ML** -<https://github.com/VatsalNanda/Mini-Projects-in-Python-ML->

**Face Recognition Attendance Based System**-Automate the attendance management system using OpenCV,LBPH Algorithm, Python and Tkinter.

**Robotic Arm**-Created a robotic arm that could move 360 degrees which could pick up and place items.

**Smart Dustbin**-Using arduino, we created a dustbin which opens when a person is in the 5 meters radius.

**OCR Recognition**-Using OCR Recognition technique of Machine Learning and the digits data set to identify digits from 0-9.

KEY SKILLS

1. **ML Algorithms 2. Clustering and Classifications 3. Data Visualisation 4. Model Development and Training and Predictive Analysis**

TECHNICAL SKILLS

**Programming Languages**: **Well Versed**-C, C++, JAVA ,SQL, **Intermediate**-Python, **Beginner**-PostgreSQL, PHP

**Software Tools**: MATLAB, MS OFFICE, LATEX, R Programming

**Packages/Libraries** :Numpy, Pandas, Matplotlib, SciPy, Scikit-Learn,Tensorflow,Keras,Seaborn, Jupyter Notebook **Machine Learning skills**:Statistical Analysis, Linear/Logistic Regression, Clustering, Regularisations **Web Development**: HTML, CSS, JAVASCRIPT

CERTIFICATIONS

1. Intro to Deep Learning | Kaggle | March 2021- April 2021
2. Machine Learning and Artificial Intelligence | Cognizance, IIT Roorkee | Issued January 2020
3. Data Structures and Algorithms | Coding Ninjas | January 2020- April 2020
4. Healthcare Innovations during COVID Outbreak | Computer Science and Engineering Discipline, at PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur | June 25-26,2021

MAIN RESEARCH AREAS/INTERESTS

**Machine Learning, Artificial Intelligence, Deep Learning,Computer Vision, Image Processing** and Medical Image Analysis and Reconstruction.

ADDITIONAL INFORMATION

English(Fluent), French(Intermediate) and Hindi(Native).