

**EDUCATION**

- M.S. in Applied Mathematics (Data Science and Machine Learning) **Northeastern University** **Boston, Sep '21 – May '23**
- B.Tech. in Biomedical Engineering **D.Y. Patil University** **Navi Mumbai, Jul '15 - Jun '19**

**EXPERIENCE**

- Project Engineer** **WeCan Educational Organization** **Mumbai, Oct '17 – Apr '19**
  - Designed and created an innovative and unique product that helped increase sales by 41% and market share in the industry.
  - Built a cloud based automated irrigation system based on soil's health which saved time and eliminated manual labor.
  - Created a drone equipped with automatic face detection technology, resulting in improved safety and security in areas such as public events and large gatherings.
  - Built a novel product using Arduino and ZigBee which aims to help healthcare professionals to use 100+ patient's real time data for medical analysis and thereby optimizing doctor's time.
  - Designed & implemented a gamified device to ease the real-time collection of 30+ patient's data using Raspberry Pi & Python.

**Technical Trainer****Mumbai, Jan '17 – Sep '17**

- Conducted Training for Embedded Systems, Python, Machine Learning, Internet of Things, Drone Development, Robotics
- Taught 800+ hours on various technologies such as Python, Machine Learning, Embedded Systems, IoT, etc. for 10,000+ students in 70+ different venues for NITI Aayog's Atal Innovation Mission as an IEEE Certified Technical Trainer.

**Teaching Assistant****Mumbai, Sep '16 – Dec '16**

- Addressed student doubts, developed coursework & projects, and provided debugging support during trainings.
- Developed an Attendance System using Face Recognition technology, to improve accuracy and efficiency in tracking employee attendance and reducing administrative tasks.

**Machine Learning Research Intern****MmM Ltd., Indian Institute of Technology****Mumbai, Aug '18 – May '19**

- Conducted research on heart attack prediction and developed predictive models using MATLAB.
- Demonstrated expertise in data collection, cleaning, and model development.

**Biomedical Research Intern****Acuradyne Medical Systems, Indian Institute of Technology****Mumbai, Oct '18 – May '19**

- Designed RC filter to denoise collected pulse signal to build Oximeter through signal processing with an accuracy of 96.3%.
- Conducted market analysis & presented optimal solutions for heart attack & stroke diagnosis, highlighting impact on patient outcomes, cost, and market growth.

**Biomedical Intern****GNRC Hospitals****Guwahati, May '18 – June '18**

- Collaborated with executive biomedical engineer to maintain hospital equipment and devices to meet best practices.
- Implemented preventive maintenance measures with MS Excel & managed sudden equipment breakdowns during surgeries.

**PROJECTS**

- **[BRAIN CT HEMORRHAGE CLASSIFICATION AND SEGMENTATION USING MACHINE LEARNING](#)** Collaborated with Zeta Surgical by using deep learning techniques, to improve accuracy and efficiency in real-time diagnosis of brain hemorrhages during neurosurgery. Applied transfer learning using a pre-trained U-NET, achieving an accuracy of 92% on the testing set.
- **[PRUDENTIAL LIFE INSURANCE RISK PREDICTION](#)** Created a risk prediction model using ML techniques, resulting in improved accuracy and efficiency in assessing and managing risk for policyholders, and better financial forecasting for the company.
- **[DIABETIC RETINOPATHY \(DR\) DETECTION THROUGH DEEP LEARNING](#)** Developed deep learning model with Keras to improve early DR detection, resulting in better patient outcomes and cost savings.
- **[PULSE DIAGNOSIS MATHEMATICAL MODEL USING MACHINE LEARNING](#)** Studied the mathematical relationship between pulse signal features and underlying disease using Decision Tree, Support Vector Machine, and Artificial Neural Network, achieving an accuracy of 45%, 55%, and 73% respectively.

**TECHNICAL SKILLS**

- Python, R, SQL, C, C++, MAPLE, MATLAB, OCTAVE, LabVIEW, HTML, CSS, JavaScript
- Pandas, NumPy, Matplotlib, Scikit-learn, TensorFlow, NLTK, Keras, SciPy, PyTorch, OpenCV, SymPy, Jupiter, PyCharm
- Regression, Clustering, Classification, Boosting, SVMs, Decision Tree, Random Forest, Dimensionality Reduction, Feature Engineering, Neural Networks, Natural Language Processing, Optical Character Recognition

**EXTRA ACADEMIC ACTIVITIES**

- President of Data Club at Mathematics department of Northeastern University (2022 - 2023)
- During COVID Pandemic, launched an initiative to develop a ventilator valve for multi-patients' use. Saw it through until an enterprise effort took over to conclude the project in order to deal with lack of ventilators during the time.
- Graduate Student Ambassador and Council Representative for Math Department in College of Science at Northeastern University (2022 – 2023). Graduate Outreach Chair Executive at Association of Women in Mathematics NU Chapter (2021 -2022)