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ROHIT KUMAR

EDUCATION

***Integrated Masters of Science in* Mathematics and Computing**
--2016-2021
Birla Institute of Technology,
Mesra
CGPA : 8.2

ACHIEVEMENTS

- Secured **69**/251 position in data science hackathon during **Cascade cup** 1st Edition.
- Secured a position in **top 4** software teams in Internal Hackathon for **Smart India Hackathon** 2020 ***(Recommended for finals)***.
- Secured **Gold Medal** at school level in **IMO 2010**.
- Represented BIT-Mesra in **SBSI 2018**.

SKILLS

- **Languages and tools:** C++, Python, JavaScript (Node Js)
- **Database:** SQL
- **Machine Learning:** sklearn, NLP, Computer Vision
- **Deep Learning:** Tensorflow, Pytorch
- **API Development:** Flask, Express
- **Deployment:** Heroku, AWS

WORK EXPERIENCE

(i) Machine Learning Intern at Tensor Matics (Labellerr) *(Jan 2021 - Present)*

- Development and research of **AI-based solutions** to **retail use-cases** for the company's in-house requirements.
- Writing **technical Blogs** on the usecases and maintainance of community service **github repo**.
- **Technologies: Python, Tensorflow, Pytorch, NodeJs**

PROJECTS

(i) Bacteria Detection with Darkfield Microscopy

- Developed a **UNet** architecture model for **image segmentation** of bacterial images.
- Handled the **imbalance** in the dataset by writing a **custom loss function** based on class samples.
- Implemented the original Unet paper for architecture.
- **Tech Stack:*Tensorflow2, UNet, Computer Vision, Python***

(ii) Early Sepsis Detector

- This project was made during SIH 2020 and was recommended for finals.
- Implemented **ensemble based classifier** models on the highly **imbalanced** physiological dataset.
- Deployed the trained model as **Rest API** using **Flask** on **Heroku** to be consumed by an Android frontend.
- **Tech Stack: *sklearn, Tensorflow2, XgBoost, imblearn, Flask, Heroku***

(iii) Indoor Navigation for Retail Store

- An **Api** for searching, listing and navigation to the aisles for a given list of products in a retail store.
- **Webscraped** the store website to create a **sqlite** database of products, appended a new feature aisle number.
- Developed a **REST API** in **Flask** to: Search for the location details of the product, provide the list of products to get the respective aisle numbers
- The endpoint tasks were handled by **CRUD** queries on the **database**.
- **Tech Stack: *Python, urllib, BeautifulSoup, SQLITE, Flask, Heroku***

PUBLICATIONS

- **Heart rate variability features from nonlinear cardiac dynamics in identification of diabetes using artificial neural network and support vector machine.**
  Journal: Biocybernetics and Biomedical Engineering
- **Heart rate variability time domain features in automated prediction of diabetes in rat.**
  Journal: Physical and Engineering Sciences in Medicine

POSITION OF RESPONSIBILITY

(i) Joint General Secretary at **NSS BIT Mesra** *(Jan2019 - Apr2019)*

(ii) Assistant Village Education Program Coordinator at **NSS BIT Mesra** *(Jul2018 - Apr2019)*

(**iii) Core Team Member** in **Pantheon 2018** *(Annual Technical fest of BIT Mesra)*