Sneh Thorat

✉ 1006sneh@gmail.com   in Sneh Thorat   ⌽ 10sneh

Objective

To seek an opportunity to work as an intern during Summer 2024.

Education

- **Incoming Student at University of Southern California, Los Angeles, USA from Fall '23 to pursue Master of Science in Computer Science.**
- B. Tech Computer Science and Engineering, MIT – World Peace University, India (2019 – 2023) with **CGPA: 9.3/10**

Skills Summary

Languages: C, C++, Python, HTML, CSS, Django, Javascript

Libraries: NumPy, Pandas, Matplotlib, Scikit learn, TensorFlow

Domains: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Front end Web-Development

Experience (Internships)

Capgemini (A global leader in consulting, technology services and digital transformation) **March 14, 2022 - July 15, 2022**

- Participated in a Kaggle Competition 'Happy Whale' and trained a model to identify dolphins using classification algorithm in **Computer Vision**.
- Learned and implemented a use case on **Edge computing technology**.
- Trained a model using **NLP** to read emotions of text sentences in e-mails.
- Trained on **amazon AWS** and executed a use case using **Python & Pyspark**.

Applus – IDIADA (An engineering company providing design, testing, engineering and homologation services to the automotive industry)   **Oct 11, 2021-Jan 11, 2022**

- Fixed the bugs in the company's website which helped in its hosting.
- Developed a comment section& Annotation tool using **Django** for the website upgradation
- Created a resume parser for ranking resumes based on Job Description; using **NLP**.

Projects

CT Scan to 3D Model using Hounsfield Units

- Designed and implemented a groundbreaking project that converts CT scan images into highly accurate 3D models using Hounsfield units.
- Leveraged advanced image processing techniques to extract data and generate intricate 3D representations, demonstrating expertise in medical imaging and computational geometry.
- Also detected soft tissues and converted it into a 3d model.

Bird Detection

- Idea generation & Leader of the project with 4 members.
- Implemented object detection algorithms. Qualitative comparison of algorithms like **YOLOV5**, **Faster-RCNN**
- Built a dataset, manually **annotated the dataset**, and implemented the algorithms.

Soft Hand Rehabilitation

- Designing a robotic glove that can aid a paralyzed person.
- The glove will work in different ways. The paralyzed person can control glove through other working hand or a machine, giving inputs for certain movements.
- INR 200K (2500 USD) funded project
- Leader of the project with 11 multidisciplinary members from Computer, Mechanical, Electrical engineering streams.

Fire Hazard Detection from Nano-Satellite imagery

- Collaborated with a team of 7 members.
- Implemented object detection algorithms such as YOLOV5, Faster-RCNN, and segmentation algorithms like Mask-RCNN, U-Net, RESUNET.
- Built and annotated a dataset for algorithm implementation.
- Achieved superior results compared to state-of-the-art models, with potential integration in a nanosatellite.

Traffic Police Detector
- Leader of the project with 4 members.
- Made a model that can detect a policeman using traffic cameras.
- The idea is to notify the Traffic control room about traffic police requirement in case the traffic concentration in certain areas increases beyond a threshold level.

Heart Disease Predictor
- Worked on a using dataset containing health parameters to detect & predict about heart disease possibilities.
- Implemented some ML algorithms like Logistic Regression, **K-Neighbors Classifier**, **Random Forest Classifier**.

Movie Booking System
- Worked on a using dataset containing health parameters to detect & predict about heart disease possibilities.
- Worked and designed detailed **UML Diagrams, Gant Chart, SRS document** for the same.

International Research Papers

Paper 1:
Topic - Identification of Traffic Police Requirements based on Traffic Concentration Along with Traffic Police Detection
Publication -   International Journal of Scientific Research in Computer Science, Engineering and Information Technology (Impact factor -7.254)
Link- https://ijsrcseit.com/CSEITCN228653

Paper 2:
Topic - Analysis of object detection techniques for bird species identification.
Publication- Journal of Physics: Conference Series (Scopus Indexed Journal)
Link- https://iopscience.iop.org/article/10.1088/1742-6596/2325/1/012054/meta

Paper 3:
Topic - Massive Open Online Courses (MOOCs): A Perspective from the Engineering Education
Publication- Journal of Engineering Education Transformations
Link- https://journaleet.in/articles/massive-open-online-courses-moocs-a-perspective-from-the-engineering-education

Courses and Certificates
- Deep Learning.AI TensorFlow Developers Certificate by Coursera. (4 courses out of 4)
- Basic Problem Solving certificate by HackerRank
- NPTEL IIT-Madras Course (12 Weeks program) on Introduction to Machine learning
- Deep Learning Specialization course by Andrew Ng (4 courses out of 5) by Coursera.
- Microsoft Technology Associate: Security Fundamentals (MTA)

Achievements
- Won Competitive State level scholarships in academics (2 times)
- Won the best paper award in a track for the paper 'Identification of Traffic Police Requirements based on Traffic Concentration Along with Traffic Police Detection' in National Students' research conference on Innovative ideas & Inventions in Computer Science & IT with its sustainability; held in Feb 2022.
- Reached 3-star Coder on 'Codechef' and secured a global Rank of 2636 / 29626 participants in April Long Challenge (DIV 3) in 2021
- Secured a rank of 7 / 51 participants in 24 hours coding marathon by Vishwakarma Institute of technology, Pune, India.

Volunteering Work
- MOOC (Massive Open Online Courses) coordinator for the Computer discipline for the university from 2021 during third & fourth year undergraduation.
- Member of the organizing team for 3 Education fairs in the University campus for studies abroad where the foreign delegates gave presentation about their universities.
- Worked as a volunteer in Pune Festival, A National level event held during a 10 days festival in India.