BHUSHAN MAHAJAN

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INTERNSHIP EXPERIENCE

Machine Learning Intern, Grroom, India Machine Learning Intern, Grroom, India, July 2021 - September 2021
- Annotated total of 5000 clothes image deploying labelImg software by making bounding box.
- Integrated YOLOv4 algorithm on annotated images for real-time object detection in Python.
- Interacted with different people (4+) in whole process, helped gain communication, networking skills.

Intern, Summer Internship, Nerul, June 2021 - July 2021
- Utilized transfer deep learning technique (DenseNet-200) for detection of black rot disease in apples.
- Constructed model on dataset comprising 2,797 images, resulting in an overall accuracy of 99.30%.
- Collaborated with two team members and acquired valuable teamwork skills.

EDUCATION

Master of Science in Computer Science, Expected June 2025
University at Buffalo, The State University of New York
- Courses - Analysis of Algorithms, Intro to ML, Information Retrieval, Computer Vision, GPA - 3.42/4.0.

Bachelor of Engineering in Electronics and Telecommunication, August 2023
Ramrao Adik Institute of Technology, India
- Secured a total of 8.79 CGPA (Scale of 10), an aggregate of 8 semesters.

TECHNICAL SKILLS

- **Programming Languages**: Python, Java, JavaScript, Html, CSS, SQL, Dart.
- **Tools & Platforms**: Jupyter, Pycharm, Colab, Tensorflow, Pytorch, GCP, Visual Studio, Matlab, Figma.
- Deep learning (DL), machine learning, Artificial Intelligence, natural language processing, big data.
- Knowledge of OOP, Data Structures, Git, cloud, information systems, networking, marketing.

TECHNICAL PROJECTS

Novel-based Chatbot, November 2023 - December 2023
- Developed a chatbot using 15 novels, integrating APIs for response accuracy and user interaction.
- Added novel-based and chit-chat modes, average response time (of 10 sec).
- Streamlined with an intuitive UI, enabling efficient query handling and information retrieval.

Road Extraction and Analysis using Preprocessing Postprocessing and Deep Learning techniques, September 2023 - December 2023
- Enabled road extraction on Satellite Road images. Performed preprocessing techniques (6226).
- Created a combined model of Resnet50 and VGG16 got 96.20% and U_net with 96.75% accuracy.
- Performed post-processing on predicted images using Edge Detection, and CRF.

Nature-Inspired Algorithm (NIA) for Improving Underwater Object Detection, September 2022 - April 2023
- Implemented strategy with 3 teammates to reduce feature dimensionality and computational costs in DL models.
- Executed Algorithms: ResNet50, ResNet101, ResNet152(2048), VGG19, and VGG16(512), extract features. NIA (PSO, RSA, SO, SSA, DMOA, FLA) to select salient features (-50%).
- Comparing performance of NIA through accuracy (98.14%), Fitness value (0.0189), Computational Time (22.19 Sec), and Number of selected Features (43).

CERTIFICATIONS

- Coursera: Python Data Structures, Programming for Everybody (Python).
- Python for data science and machine learning, Neural Networks.
- Machine Learning with Python: Zero to Gbm.

EXTRACURRICULAR ACTIVITIES

- Served as an Event Manager in Python CSE workshop (2023).
- Event Management Head, core position (2022-2023).
- Hospitality Head for ISTE-RAIT (2021-2022).
- Hospitality co-head for ISTE-RAIT (2020-2021).
- Volunteered for Innovision Techfest for ISTE-RAIT (2019).