Akanksha Das

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EDUCATION

University at Buffalo, The State University of New York Dec 2022
Masters in Electrical and Computer Engineering (GPA: 3.75/4.0)
Coursework: Machine Learning**,** Probability and Stochastics, Deep Learning, Big Data Analytics, MRI, Principles of Networking

Visvesvaraya Technological University, Bengaluru, India Aug 2020
Bachelors of Engineering, Electronics and Communication Engineering (GPA: 8.28/10.0)
Coursework: Engineering Mathematics, Programming in C and C++, Management and Entrepreneurship, Computer Networks, Operating Systems, Cyber Security

SKILLS

- **Programming Skills:** Python, SQL, C, C++, Embedded C, MATLAB, Verilog HDL
- **Machine Learning:** Linear Models, KNN, SVM, Decision Tree, Random Forest, Neural Networks, K Means Clustering, XGBoost, Naive Bayes, Feature Selection, Resampling(Cross-validation, SMOTE), Reinforcement Learning
- **Libraries:** TensorFlow, Keras, Pytorch, Seaborn, Pandas, NumPy, Scikit-Learn, Matplotlib, Sklearn
- **Developer Tools:** Jupyter Notebook, Visual Studio, GoogleColab, PyCharm, Git
- **Certification:** Completed courses on Networking Fundamentals through MTA, Machine Learning, SQL, Python, MATLAB Business Analysis Foundation and Product Management Overview through Coursera and LinkedIn Learning. Concluded Software Engineering course via CodePath.

PROFESSIONAL EXPERIENCE

Graduate Student Assistant, University at Buffalo Jan 2022 - Dec 2022
- Supervised lab sessions in circuit design and simulation and conducted office hours for 100-plus students.
- Assisted students with their assignments, coding in python and graded papers for the course on Signals and Systems.

Digital Marketing Intern, Tars, Bengaluru, India May 2021 - Aug 2021
- Built over 15 industry-specific chatbots for various clients and automated 66% of their customer service conversations.
- Led the efforts of prospecting co-hosts and co-promoters for the company's monthly webinars and circulated social media copies.

Graduate Engineer Trainee, Huawei Technologies, GSC India July 2020 - April 2021
- Monitored KPIs of the networks and prepared hourly reports and charts using Microsoft Excel for network optimization.
- Designed and evaluated Single Site Verification (SSV) reports for customer sites.
- Actively worked on the deployment of 5G networks in the regional project.

ACADEMIC PROJECTS

Celestial Object Detection Using Computer Vision and Deep Learning: Nov 2022
- Designed a CNN-based model to classify astronomical images as stars or galaxies. The images were modified using connected principles of Computer Vision and run through the neural network to obtain an accuracy of 0.85. The model was deployed on the local device to predict the class of the input image correctly.

Super Image Resolution Using Deep Learning: Oct 2022 - Dec 2022
- Building an adversarial network to convert low-resolution images to high-resolution using deep learning techniques.

Amazon Sustainability Data Initiative Global Hackathon(Food Waste): July 2022 - Aug 2022
- Lead a team of 10 in the food wastage project to analyse and review food wastage and its environmental impact. Data was analysed using python libraries while building a website to provide options to reduce food wastage.

Cervical Cancer Detection: May 2022 - July 2022
- Machine Learning approaches like SVM with SMOTE, random forest and neural networks were used to compare the model performance for each of the common tests for cervical cancer. Built a tracking web app with over 200 users.

Migraine Classification with Deep learning: June 2022
- Developed a neural network to predict the type of migraine from relevant attributes. The imbalanced dataset was sampled to obtain accurate results. Linear regression and random forest were also applied to the dataset to compare the results of the model.

Deep Racer (Amazon AWS): Mar 2022 - May 2022
- Developed and structured the rewards parameter of the algorithm leveraging Reinforcement Learning and trained the model to complete tracks in a record time of 16 seconds and obtained the top 5 places in the class.

CNN using Fashion MNIST: April 2022
- Designed and implemented a convolutional neural network along with several hyperparameters optimisation using the Fashion MNIST dataset and obtained an accuracy rate greater than 92 per cent

PUBLICATION AND LEADERSHIP

- Published a paper titled "A review on implementation and applications of Artificial Intelligence" in the International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering.
- *Research Leader, Society and Computing Club (March 2022 till Present):* Researching in a team of 20 on how Predictive Policing Algorithms can reflect, exacerbate or create racial bias within the policing system while drafting a webpage of compiled resources.