Deepak Yadav

Consultant at Sony (AI and Machine Learning)
www.linkedin.com/in/dky7376

Email: dky.united@gmail.com
Mobile: +91-9836375132

Education

- **Indian Institute of Engineering Science And Technology** — Howrah, WB
  Master of Technology in Information Technology; GPA: (7.0/10.0) — *Aug. 2017 – June. 2019*
  - **Relevant Coursework**: Machine Learning, Algorithms, Information and Coding Theory, Advanced Database Management System.
- **United College of Engineering and Research** — Allahabad, UP
  Bachelor of Technology in Electronics and Communication Engineering; GPA:(6.8/10.0) — *Aug. 2010 – July. 2014*
  - **Relevant Coursework**: Signal and Systems, Microprocessors, VLSI Design and Embedded System.

Experience (4.5 years)

- **Sony** — Bengaluru, Karnataka
  Consultant — *Jun 2021 - Present*
  - **Objective**: Create a framework to easily evaluate the accuracy of different deep learning models on the IMX500 Intelligent Vision Sensor device.
  - **Contribution**: Developed a flexible framework that can handle various advanced machine learning models for tasks like classification, object detection, and semantic segmentation. Assessed the accuracy of these models on IMX500 devices, ensuring reliable performance for different scenarios, Additionally, incorporated quantization techniques to reduce the model size and optimize performance on the IMX500 device.
  - **Tools**: Tensorflow, Pytorch, Scikit-learn, Python, Streamlit, Object-oriented design.
- **Activa Inc.** — Hyderabad, Telangana
  Associate Data Scientist — *Dec 2019 - Apr 2021*
  - **Objective**: Building an automated AI platform that works with tabular data, raw text, time series, and images.
  - **Contribution**: Automated the time series forecasting pipeline using a genetic algorithm, resulting in a significant reduction in training time. Implemented distributed training across multiple GPUs for performance optimization. Deployed models automatically across a variety of environments, including creating a REST endpoint and running as a service in the cloud.
  - **Tools**: Tensorflow, Pytorch, Scikit-learn, Python, Docker, Flask, AWS EC2, AWS Kinesis, REST, CI/CD.
- **Activa Inc.** — Hyderabad, Telangana
  Data Science Intern — *Aug 2019 - Dec 2019*
  - **Objective**: Developed a proof of concept (PoC) for United Technologies Corp. (UTC) to automate aircraft engine internal crack detection.
  - **Contribution**: Built a computer vision model using Mask-RCNN that can easily detect cracks in the internal parts of the engine.
  - **Tools**: Computer Vision, Object Detection, Instance Segmentation, Mask-RCNN, Python, Tensorflow, OpenCV.
- **IIEST Shibpur** — Howrah, WB
  Postgraduate Researcher — *July 2018 - June 2019*
  - **Objective**: Fault Detection in Wireless Sensor Networks (WSNs).
  - **Contribution**: Conducted a comprehensive comparative analysis of statistical and machine learning methods for fault detection in Wireless Sensor Networks (WSNs). Developed a robust algorithm that effectively identifies faulty nodes in WSNs, resulting in enhanced accuracy compared to existing methods. The designed algorithm significantly improves the detection capabilities, providing a reliable solution for fault identification in WSNs.
  - **Tools**: Python, Machine Learning, Statistics, IoT, Sensor Networks.

Open Source Projects

- **Robustbase**: Open Source Python library for statistical estimation with 23,000+ downloads.
- **HyperTune**: Open source hyper-parameter optimization library using genetic algorithms.
- **WSNFault**: Statistical fault detection algorithm for Wireless Sensor Networks (WSNs).
- **downcast**: Automatic reduction of pandas data frame size with 44,000+ downloads.
- **complex**: Compute complex number operations: addition, subtraction, multiplication, division, and modulus with 32,000+ downloads.