SHRAVAN CHANDRA

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EXPERIENCE

Software Developer Aug 2021 - Present
Bosch Global Software Technologies Bangalore, IN

- Rewrote legacy **VBA** code in **Python** and refactored it to make the system more extensible.
- Developed web-scraping tools with **Python** to collect, analyze & comapre components for ECUs. The tool was able to reduce the manual work by **80%**.
- Involved in developing automation tools using **Python** for **SAP** & other internal assignments, currently used by **25+** people reducing the time expense by **60%**.
- Spearheaded the development of **15+** algorithms to extract required data from LST files to understand the connections on a PCB, identify redundant components, estimate price and suggest replacements. An improvement of over **30%** in accuracy over the previously used algorithms and a **45%** reduction in time requirements.

Junior Analyst Intern Jan 2021 - July 2021
Goldman Sachs Bangalore, IN

- Collaborated on developing models and analytics using **SQL** & **R** to understand how risk decisions influence new/existing products, determining risk policies, and pinpointing inefficiencies in risk operations.
- Implemented web-scrapping tools with **Beautiful Soup** to automate cross-verification of documents for faster bookings of trades. This CLI app was able to reduce the time expense by **65%**.

RESEARCH PROJECTS

Dynamic Sign Language Translator — Paper Published @ IEEE

- Developed a real-time translator to identify the dynamic hand gestures and interpret them using a camera. The model can interpret **15** distinct gestures and translate them to any language with **92%** accuracy.
- Created using **OpenCV**, **MediaPipe** & **XGBoost**, the dataset and the models are **open-sourced** for snowballing support from the community and quicker adoption.

Diabetic Retinopathy with XAI

- Constructed an **Xception** model for retinopathy severity level classification using **TensorFlow**, with **OpenCV** for processing the retina fundus. Attained **96%** Kappa Score and **93%** accuracy, **10%** more than the baseline.
- Pipelined the classifier with **Grad-CAM** to create saliency maps on the fundus and highlight prominent features like hemorrhages, exudates & microaneurysms for enhanced reliability.

Offensive Speech Detection

- Built a hierarchical multitask learning model with adversarial training using **Keras** & **NLTK**. Improved the scores by **6%** using transfer learning using Sentiment Analysis data correlating sentiment and offensive speech.

Low-Light Object Detection

- Implemented an end to end object detection model using Zero-DCE and YOLOv3, built using **PyTorch** & **OpenCV**. Achieved **10%** improvement in mAP score compared to vanilla YOLO.

EDUCATION

Bachelor of Technology in Electrical & Electronics, PES University — 8.49 2017 - 2021
CNR Rao Scholarship Awardee. MRD Scholarship Awardee.

SKILLS

Languages	Python, Java, HTML/CSS, JavaScript, SQL, R
Technologies	TensorFlow/Keras, PyTorch, Scikit-Learn, OpenCV, NLTK, Git, PostgreSQL, Excel, Linux