Shubham Bindal

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EDUCATION

IIIT VADODARA

B.Tech
Computer Science & Engineering
2017 - 2021
CPI: 8.61 / 10.0

SKILLS

PROGRAMMING LANGUAGES

• Python • C
Familiar:
• Matlab • R

AREAS OF INTEREST

• Deep Learning
• Machine Learning
• Computer Vision
• Data Science
Familiar:
• NLP

FRAMEWORKS/LIBRARIES

• Tensorflow • Keras • Matplotlib
• Pandas • Scikit-learn • Numpy • Pillow
• OpenCV • Detectron2
Familiar:
• PyTorch • Apex

DATABASE

• PostgreSQL

COURSEWORK

Machine Learning
Deep Learning
Image Processing
Data Analytics
Data Structures & Algorithms
Object Oriented Programming

LINKS

LinkedIn:// **shubham−bindal**
Github:// **Shubhambindal2017**

OTHER ACTIVITIES

• Former Mentor and President of IIIT-V Sports Committee
• Led IIIT-V contingent at Inter IIIT Sports Meet, 2019, and 2020.
• Volunteering experience at IIIT-V Technical fest, CEREBRO, 2018, and 2019.

EXPERIENCE

MERCER - METTL | AI Engineer

Jul 21 - Present

- Building an AI-based authenticator that automatically authenticates candidates using their ID card images, aiming to reduce the workload of manual proctors by 50% (in the first iteration of the product).

VISENZE | AI Algorithm Engineer Intern

Jan 21 - June 21 | Singapore Office - Remote

- Improved "street-style fashion category tagging model" for 2 critical bad cases.
- Improved "product fashion category classification model" for a customer by enriching training data using Active Learning, increased recall of 'dress' by 14%.
- Built a 98% accurate tagging model to filter sensitive bad cases from detection model's predictions - foot/hand/eyes from shoes/gloves/eyewear detections.

MACHINE LEARNING STUDIES | Deep Learning Intern

Apr 20 - Jul 20

- Worked on an object detection problem for a retail store, used Detectron2 for this, and fine-tune pre-trained Faster-CNN, Mask-RCNN, and Cascade-RCNN.
- Explored the problem of domain shift, and creating artificial datasets with diversity to improve the recall score from 54% to 96%.
- Performed significant analysis for adding augmentations, views, and constraints, as well as utilize image processing techniques like morphological processing, connected components, and grabcut for cleaning up data.

OMDENA | Junior ML Engineer (Project)

Jul 20 - Aug 20

- Collaborated with 50 other AI practitioners in partnership with 'Trash Out' to fight against Illegal Dumping.
- Developed an inception and a Mask RCNN model to identify if a shopping product is environmentally friendly and to which recycling bin it belongs.

MUSE WEARABLES | Data Science Intern

Oct 19 - Nov 19

- Built $\sim$ 90% accurate deep learning models - age and gender prediction and language identification, for a product that analyzes the impact of an Instagram influencer on the audience.

RESEARCH

MACHINE LEARNING STUDIES | AI Research Intern

Aug 20 – Oct 20

Worked on a technique for producing better "Visual Explanations" for decisions from CNN-based models.

PROJECTS

Super Resolution of an Image (Sr-Gan)

Implemented a Generative Adversarial Network based on a CVPR paper that can super-resolve any image by a factor of x4 with better perceptual quality.

Forecasting of Parking Occupancy

Analyzed Birmingham car parking dataset, and developed a SARIMA model to forecast the seasonal time-series based occupancy rate of the whole city.