

Abhishek Verma

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LINKS

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EDUCATION

IIIT ALLAHABAD

B. TECH, M. TECH DUAL DEGREE
IN INFORMATION TECHNOLOGY
2013 - 2018

B. TECH CGPA: 8.53

M. TECH CGPA: 8.78

SKILLS

PROGRAMMING

• Python • TensorFlow • OpenCV

PROFICIENCY AREAS

• Deep Learning • Machine Learning •
Computer Vision • NLP

ACHIEVEMENTS

- KAGGLE EXPERT
- **BLOGGER ON MEDIUM (110K VIEWS)**
- **1490 REPUTATION POINTS**
on stackoverflow.com
- **728 REPUTATION POINTS**
on ai.stackexchange.com
- **624 REPUTATION POINTS**
on datascience.stackexchange.com
- **SPEEDSOLVING RUBIK'S CUBE**
(26.60s)

PERSONAL PROJECTS

• TWEET AUTOMATION

Automatically send tweets without any hassle

• AUTOMATIC VIDEO GENERATION

Given a corpora of audio and video files, it intelligently creates a mix of them.

WORK EXPERIENCE

Expedia Group | MACHINE LEARNING ENGINEER II

Oct 2021 – Present | Gurugram, Haryana

- Developed optimizer for Spark jobs which automatically finds the best configuration for a given data. Reduced effort across the teams by 30%.
- Developed and deployed a price prediction module which allows us to stay on the top of the competition. Improved model performance by 10% and model pipeline time by 20%.
- Developed and deployed a geo-clustering module allowing to accurately take business decisions on local and global scale. Improved model pipeline time by 50%.
- Skills Used: Time Series Forecasting, NLP, Spark, XGBoost, Flask, Docker, Jenkins, Grafana and AWS.

TCS Research Labs | DATA SCIENTIST

Aug 2018 – Oct 2021 | Gurugram, Haryana

- Developing Fraud Management System (CV + NLP), Biometric Systems (CV) and MLOps at UIDAI Aadhar.
- Developed OCR for handwritten and printed text. Reduced memory footprint by 12% and model size by 40%.
- Developed Document Cleaning Suite for tackling background noise, blurring, watermarks and fading in scanned documents using unlabelled data.
- Skills Used: Deep Learning (GANs, Transformers and CNNs), Python, PyTorch, TensorFlow, OpenCV, NumPy, Scikit-Learn, Flask, Docker, Jenkins, and Kubernetes,

PUBLICATIONS

Interpretability for Medical Images | Journal: Multimedia Tools and Applications, 2020

- A quadtree based approach to find ROIs which contain the discriminative regions behind the prediction. Localization of the discriminative region in small boxes can help in interpreting the prediction.

Learning to Clean: A GAN Perspective | Conference: ACCV 2018 | Perth, Australia

- GANs have been used to generate denoised version of noisy documents. Results demonstrate that our approach learns a more robust mapping from the space of noisy to clean documents.

PROJECTS

Improving Cross-Border Child Protection | NLP, TensorFlow, Python | 8 weeks

Worked in the project as Lead ML Engineer for ISS. Our team built various models for providing insights and recommendations integrated into a web application. The application improves the quality of case management using NLP.

Detecting Pathologies Through Computer Vision In Ultrasound | Computer Vision, PyTorch, Python, Flask, Docker | 8 weeks

Worked in the project as Lead ML Engineer for Envision IT. Our team created deep learning models to help doctors in Africa use sonograph machines to get more accurate diagnosis of patients. We worked on object detection, segmentation and image classification models. We deployed the models on smartphone and online as-a-service.

Detecting Weeds Crops Using Drone Imagery To Reduce Environmentally Devastating Herbicides Usage | Computer Vision, PyTorch, Python, Azure | 8 weeks

Worked in the project as Lead ML Engineer for Skymaps Agrimatics. Our team worked on creating computer vision models (image segmentation, image superresolution and object detection) and integrated the models in a semi-automated annotation tool (CVAT) to detect Weeds Crops from drone imagery.