

VISHAL AGARWAL

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EXPERIENCE

- **Microsoft Research India** Bangalore, India
Research Software Development Engineer *August 2021 - Present*
 - Working at the intersection of computer vision and accessibility to make all kinds of printed content accessible.
- **Machine Learning Engineer, Wadhwani AI** Mumbai, India
Wadhwani Institute for Artificial Intelligence *June 2019 - July 2021*
 - Developed and deployed a deep learning solution to identify harmful pests and reduce crop loss in cotton farming. Used object detection model and applied model compression on it to do efficient on-device inference. Currently used by over 20,000 farmers and improved farmers income by 24%.
 - Only project from Asia and among top 3 teams worldwide to win \$2 million grant from the Google AI Impact Challenge for the AI-based solution in cotton farming. Our efforts recognized by organizations such as PyTorch [\[blog\]](#) and Google.org [\[blog\]](#)
 - Led machine learning engineering efforts and developed an internal ML platform with CI/CD/CT for streamlining training, testing, deployment and evaluation of machine learning models in production.
- **Summer Intern, NVIDIA** Bangalore, India
GPU Performance Verification Team *May 2018 – July 2018*
 - Improved latency profiling and performance analysis for tensor workloads and optimized GPU performance 3x in a perf simulated environment.
- **Summer Research Intern, Hanyang University** Ansan, South Korea
Computational Vision and Fuzzy System Lab *May 2017 – July 2017*
 - Developed an image contrast enhancement technique based on fuzzy type-II and histogram specification which auto generates the appropriate probability density function as a function of input image.

PUBLICATIONS/MANUSCRIPTS

- **Pest management in cotton farms: an AI-system case study from the global South** [\[paper\]](#)
Aman Dalmia, Jerome White, Ankit Chaurasia, Vishal Agarwal, Rajesh Jain, et al.
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2020
- **Unsupervised Representation Learning of DNA Sequences** [\[paper\]](#)
Vishal Agarwal, N. Jayanth Reddy, Ashish Anand
International Conference on Machine Learning (ICML) Workshop on Computational Biology 2019
- **Deep Face Quality Assessment** [\[paper\]](#)
Vishal Agarwal
- **An Interval Type-2 Fuzzy Approach to PDF Generation for Histogram Specification** [\[paper\]](#)
Vishal Agarwal, Diwanshu Jain, Vamshi K. Reddy, Frank Chung-Hoon Rhee

EDUCATION

- **Indian Institute of Technology Guwahati** Guwahati, India
B.Tech in Electronics and Electrical Engineering with minor in Computer Science (Rank: 3/51) *2015 – 2019*
 - Undergraduate Teaching Assistant. GPA 8.84/10.

SKILLS

- **Skills:** Machine Learning, Deep Learning, ML Engineering, MLOps
- **Languages:** Python, C++, Java, MATLAB, L^AT_EX
- **Framework:** PyTorch, Keras, TorchServe, AWS Sagemaker, Django, Kubeflow
- **Miscellaneous:** Git, Docker, AWS, Kubernetes