

Shubham Dokania

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Education

International Institute of Information Technology Hyderabad

MS BY RESEARCH IN COMPUTER SCIENCE

Hyderabad, India

Aug. 2020 - Present

Delhi Technological University

B.TECH IN MATHEMATICS AND COMPUTING (CGPA: 7.41/10.0)

Delhi, India

Aug. 2013 - May 2017

North Delhi Public School

ALL INDIA SENIOR SECONDARY CERTIFICATE EXAMINATION (87.6%)

Delhi, India

May 2013

Research

Journals

- Garg Neelansh*, Apuroop Sethupathy*, Rudraksh Tuwani*, Rakhi Nk*, **Shubham Dokania***, Arvind Iyer, Ayushi Gupta et al. "FlavorDB: a database of flavor molecules." *Nucleic Acids Research* 46, no. D1 (2018)
- Wadhwa, Somnath*, Aishwarya Gupta*, **Shubham Dokania***, Rakesh Kanji, and Ganesh Bagler. "A hierarchical anatomical classification schema for prediction of phenotypic side effects." *PloS One* 13, no. 3 (2018).

Conference & Workshops

- **Shubham Dokania**, Ayush Chopra, Feroz Ahmad, S. Indu, and Santanu Chaudhury. "Unsupervised Feature Descriptors Based Facial Tracking over Distributed Geospatial Subspaces." *International Conference on Pattern Recognition and Machine Intelligence*, 2017.
- **Shubham Dokania**, Ayush Chopra, Feroz Ahmad, and Anil Singh Parihar. "Hierarchy Influenced Differential Evolution: A Motor Operation Inspired Approach." *9th International Joint Conference on Computational Intelligence (IJCCI) 2017*
- **Shubham Dokania**, Sunyam Bagga, and Rohit Sharma. "Opportunistic Self Organizing Migrating Algorithm for real-time Dynamic Traveling Salesman Problem." *51st Annual Conference on Information Sciences and Systems (CISS 2017)*
- **Shubham Dokania***, Vasudev Singh*. "Graph Representation learning for Audio & Music genre Classification." *NeurIPS 2019 Workshop Paper*

Experience

Mercedes-Benz Research & Development India

RESEARCH ENGINEER

Bengaluru, India

Aug. 2018 - Present

- Applied Research in Deep Learning with focus on Computer Vision for Intelligent Interior in Mercedes-Benz Cars.
- Worked extensively on MBUX Intelligent Interior Assistant, and sub-modules.

Attentive.AI

RESEARCH ENGINEER (LEAD)

New Delhi, India

Feb. 2018 - June 2018

- Supervised a team for revolutionizing building footprint extraction using deep learning and computer vision on Satellite Imagery.
- Worked on Adversarial Training of segmentation models, and vector-based post-processing information for accurate mapping to GIS systems.

Ambient AI

ML INTERN

Palo Alto, CA (Remote)

Oct. 2017 - Jan. 2018

- Built Systems based on multi-camera information for automated surveillance systems and activity monitoring.
- Undertook the construction of a fast annotation tool for labelling and marking of objects with model-in-loop technology.

CVIT Group, IIT Hyderabad

RESEARCH INTERN

Hyderabad, India

Aug. 2017 - Oct. 2017

- Dealt with problems related to Reinforcement Learning and possible applications to Computer Vision tasks via analysis in simulated environments. Compared performances of various methods on toy tasks.

CoSys Lab, IIIT-Delhi

New Delhi, India

VISITING RESEARCH INTERN

May 2017 - Aug. 2017

- Worked on the application of Data Science to the task of drug side-effect prediction as a multi-class learning problem with sparse data, along with molecular level analysis of food ingredients.

Coding Blocks Pvt. Ltd.

New Delhi, India

INSTRUCTOR AND MENTOR

June 2016 - July 2017

- Instructor for the Machine Learning course. Taught over 300+ students from a wide variety of backgrounds, and paved a way towards research oriented concepts via interactive lecture sessions.

Evolutionary Computing and Optimization Lab, DTU

New Delhi, India

UNDERGRADUATE RESEARCHER

Sept 2015 - May 2017

- Proposed variants to the popular methods in Evolutionary optimization techniques including Differential Evolution and showed its applications on complex problems such as Dynamic Traveling Salesman Problem.

Omnipresent Robot Tech

New Delhi, India

SOFTWARE ENGINEERING INTERN

July 2015 - Aug. 2015

- Worked with ATmega and Arduino Chip based systems and built a visual interface for programming of line-following robot kits for children.
- Built web based interfaces for Internet-of-Things based tasks with the help of tools such as Django, Flask, Javascript.

Honors & Awards

2020	Product Innovation Award , Mercedes-Benz Research & Development India	Bengaluru, India
2019	3rd Prize , InOut 6.0 Hackathon	Bengaluru, India
2016	Special Invitation , To The President's Estate, for Code For India 2016	New Delhi, India
2015	Grand Prize , Code for India 2015 Hackathon	New Delhi, India
2015	Grand Prize , HackIndia 2015 Hackathon	Bangalore, India
2015	1st Place in Track , PolicyHack by EPoD Harvard	New Delhi, India
2015	3rd Prize , </geekfest> by IBM	New Delhi, India
2015	Special Mention , Byldathon IIITD	New Delhi, India
2013	Best Student Award , by Times of India	New Delhi, India
2010	2nd Rank in State , National Science Talent Search Examination	New Delhi, India

Talks and Presentations

- Internal Talk on Gaussian Processes at Mercedes-Benz R&D India (2020)
- On Introduction to Machine Learning and Deep Learning methods, at Coding Blocks (2018)
- Workshop Speaker at PyData India 2017, On Reinforcement Learning.
- Session on Reinforcement Learning at CVIT group, IIIT-Hyderabad (2017)
- Talk at CoSys Lab, IIITD on Sequence Modeling with RNN and LSTM (2017)
- Speaker at Machine Learning Seminar and Workshop at NSIT, New Delhi. Organized by Coding Blocks (2017)

Skills

Programming	Python, JavaScript, HTML, Lua, C++
Libraries	PyTorch, Tensorflow, Keras, Numpy, OpenCV, Flask, Scikit-Learn, Django
Others	Docker, \LaTeX , Linux OS, Unity3D