

SABYASACHI SAHOO

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EDUCATION

Indian Institute of Science (IISc), Bangalore 2014 - 2016
M. Tech - Computational Science, Dept. of Computational & Data Sciences (CDS) CGPA: 6.3 / 8

Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat 2010 - 2014
B. Tech - Mechanical, Mechanical Engineering CGPA: 7.52 / 10

RESEARCH EXPERIENCE

Research Associate, Machine Learning Lab, IISc Feb 2019 - Present
Advisor : [Chiranjib Bhattacharyya](#)

I broadly work on unsupervised learning (generative models, disentanglement, domain adaptation), explainable models, AI in healthcare (disease classification/segmentation) and robotics (LiDAR, SLAM). Some of these projects are in collaboration with [Tata Motors](#), [Ati Motors](#) and [Niramai](#).

Deep Learning Engineer, Donut Research Labs Jun 2018 - Feb 2019
Supervisor : [Latha Iyer](#) (Machine Learning R&D group)

I broadly worked on NLP research problems like extreme text classification and text normalization. I also worked on object and text detection on product images.

Research Student, Middleware and Runtime Systems Lab, IISc Jan 2015 - July 2016
Advisor : [Sathish S. Vadhiyar](#)

I worked on extracting semantic context in CNNs. For my master's thesis, I worked on reducing inter-process communication times for molecular dynamics applications on Cray XC40 supercomputer.

PUBLICATIONS

- **Sabyasachi Sahoo***, Suchit Jain*, Santosh Shet*, Siva Teja Kakileti, Chiranjib Bhattacharyya, Geetha Manjunath. (In Progress). **“COVID-SWIFT : Simple Whatsapp based x-ray Image interpretation at your Finger Tips for potential COVID19 patients”**. (to be submitted to Medical Imaging NeurIPS Workshop 2020) [[link](#), [request pdf](#)]
- **Sabyasachi Sahoo***, Prashant Kumar*, Vanshil Shah, Vineetha Kondameedi, Abhinav Jain, Akshaj Verma, Chiranjib Bhattacharyya, Vinay V. (Sep 2020). **“DSLRL : Dynamic to Static LiDAR scan Reconstruction using adversarially trained autoencoder”**. AAAI Conference on Artificial Intelligence 2021 (AAAI 2021 submission) [[request pdf](#)]
- **Sabyasachi Sahoo**, Sathish S. Vadhiyar. (July 2016). **“Hierarchical Task Mapping on Dragonfly topology for scaling Molecular Dynamics”**. Masters Thesis. [[link](#), [pdf](#)]

RESEARCH PROJECTS

- Abhinav Jain*, **Sabyasachi Sahoo***, Vineetha Kondameedi, Chiranjib Bhattacharyya. (In Progress). **“CID: Captioning for Interpretability and Disentanglement”**.
- Tezuesh Varshney*, Vineetha Kondameedi*, **Sabyasachi Sahoo**, Chiranjib Bhattacharyya. (In Progress). **“HRHQ: High Resolution High Quality image disentanglement”**.
- Suchit Jain, Vineetha Kondameedi, **Sabyasachi Sahoo**, Chiranjib Bhattacharyya. (In Progress). **“RUDE: 3d Reconstruction Using DisEntanglement”**.
- Akshaj Verma, **Sabyasachi Sahoo**, Santosh Shet, Chiranjib Bhattacharyya. (In Progress). **“Unsupervised Domain Adaption for cross domain Lung Segmentation on Chest Xray Images”**.
- Dhiraj Shanbag, **Sabyasachi Sahoo**, Chiranjib Bhattacharyya, Vinay V. (July 2020). **“Unsupervised Scene Flow Prediction for consecutive LiDAR scans”**. [[request pdf](#)]
- Vineetha Kondameedi, Santosh Shet, Akshaj Verma, **Sabyasachi Sahoo**, Prashant Kumar, Chiranjib Bhattacharyya, Soma Biswas. (May 2020). **“FAIR: Frugal ADAS for Indian Roads”**. [[request pdf](#)]
- **Sabyasachi Sahoo**, Vineetha Kondameedi, R. Venkatesh Babu, Partha Pratim Talukdar. (May 2015). **“Establishing Semantic relationships among object classes using Deep Networks to Image Classification”**. [[code](#), [pdf](#)]

ENGINEERING EXPERIENCE

Software Engineer II, NVIDIA

Aug 2016 - May 2018

Supervisors : [Raghavendra VK](#) and [Ravi Chandra SV](#)

I owned display and device tree modules on all self driving platforms and worked on Xavier chip bringup.

TEACHING AND LEADERSHIP ROLES

- **ML/Autonomous Navigation Paper Reading Group**, IISc : Conduct and deliver talks on latest machine learning and autonomous navigation research papers. [[youtube](#)]
- **Research Mentor**, [SHARE Research Labs](#) : Teaching and mentoring students on the platform for working towards a research paper for top-tier conferences.
- **Deep Learning Brainstorming Sessions**, Donut Research Labs : Conducted and taught weekly sessions on latest deep learning research and engineering pipelines.
- **Placement Coordinator**, IISc : Invited, organized and coordinated on-campus placement for numerous MNCs and startups.
- **Head Coordinator Technical Events**, SVNIT : Formulated, organized and headed various technical events for technical college festival "Mindbend 2013".

HONORS AND AWARDS

- Ranked Top 5 in class in M.Tech IISc 2016
- NIPS 2017 Challenge ([winner](#)) [[code](#)]
- SO1 Customer Basket Prediction (3rd place) [[code](#)]
- Deep Traffic for self driving car (awarded finalist)

PERSONAL PROJECTS

- Depth Map for Image Classification [[code](#)]
- Car Image Masking [[code](#)]
- Text Normalisation for English [[code](#)]
- Paraphrase detection on Quora questions [[code](#)]

OTHER ACTIVITIES

- Selected for Oxford Machine Learning ([OxML-2020](#)) Summer School
- Selected for Deep Learning Reinforcement Learning ([DLRL-2020](#)) Summer School
- Selected for Eastern European Machine Learning ([EEML-2020](#)) Summer School
- [ICML 2020](#) Conference Volunteer
- State Level Lawn Tennis and Basketball player