

Lakshwin Shreesha M K

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RESEARCH INTERESTS	Basal Cognition Complexity, Machine Learning, Bio-physics.	
EDUCATION	B.E., Electrical and Electronics Engineering (Distinction) BMS College of Engineering, Bangalore, India	Aug 2019
PUBLICATIONS	Multi-PCA Driven Approach for Fault Detection and Root Cause Analysis of Process Equipment ¹ Jinendra K G, Rahul K. Vij, Srini .R, Lakshwin Shreesha M. K AAAI Spring Symposium: Combining Machine Learning with Knowledge Engineering (1), 2020	
POSTER PRESENTATIONS	Autonomous Navigation using Inverse Reinforcement Learning Anirudh GJ, Lakshwin S , Bharath B, Siddharth S REV2019: 16th International Conference on Remote Engineering and Virtual Instrumentation , 2019	
RESEARCH EXPERIENCE	RIT, Rakuten Institute of Technology Bangalore, India	July 2019 to December 2019 (Six months)
	Contextual Embedding Reasoning about an image by inferring relationships between objects. <ul style="list-style-type: none">• Developed a neural network that embedded representations of associated objects together in feature space.• Tried to infer relationships using the posterior: $P(y = 2^{nd} object \mid x = 1^{st} object)$	
	Unsupervised image classification <ul style="list-style-type: none">• Developed an iterative, clustering based, image classification process for unlabelled images.• Re-purposed Grad-CAM in the resulting classifier to localize the object of interest.	

¹Blue links hyper-reference projects, research papers, and relevant institutions.

ABB Research Lab
Bangalore, India

June 2018 to August 2018
(Three months)

Fault detection using multiple principal component analysis

- Designed and published the Multi-PCA algorithm.

UNDERGRADUATE
RESEARCH

September 2018 to June 2019
(Ten Months)

Traj2Vec: An Inverse Reinforcement Learning algorithm²

An algorithm that tries to learn a task by watching a human expert show it how.

PERSONAL
PROJECTS

- Founded **Dimension Labs**: An open source venture to teach Machine Learning theory on twitter (2021)
- Open sourced an implementation of the paper *Editing text in the wild*: a scene text editing generative adversarial network. (2020)

AWARDS

- **Third place at AccelATHON³**: We leveraged a Resnet-101 to diagnose Diabetic Retinopathy. (2019)
- **First place at ABB Hackathon**: We developed a long range cloud based solution using LoRa to enable data transmission from remote villages. (2018)

²A list of my projects (with code) can be found here: projects@notion.lakshwin

³An intercollegiate hackathon for social innovation.