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RESEARCH INTERESTS	To formalize an explanatory theory of Intelligence. Machine Learning, Neuroscience, Bio-chemistry, Physics, Psychology.	
EDUCATION	BMS College of Engineering , Bangalore, India B.E., Electrical and Electronics Engineering, April 2019 <i>(first class with distinction)</i>	
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	
RESEARCH EXPERIENCE	RIT, Rakuten Research Lab Bangalore, India	July 2019 to December 2019
	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

Fault detection using multiple principal component analysis

- Designed and published the Multi-PCA algorithm.

**UNDERGRADUATE
RESEARCH**

September 2018 to June 2019

Traj2Vec: An Inverse Reinforcement Learning algorithm²

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

- Ran analytical experiments on Apprenticeship learning and Guided cost learning in a custom environment to assess their strengths and weaknesses.
- Designed the CNN-autoencoder to spatially encode trajectories.

**ENGINEERING
PROJECTS**

- Open sourced an implementation of the paper *Editing text in the wild: a scene text editing generative adversarial network*. (2020)
- Built an Electric skateboard: Designed the radio controller and power delivery system. (2018)

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.