Lakshwin Shreesha M K

BMS College of Engineering
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https://niwhskal.github.io

RESEARCH INTERESTS	**To formalize the dynamics of Intelligence.** Mathematics, Neuroscience, Bio-chemistry, 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.

- 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

- 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.

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

ABB Research Lab   **June 2018 to August 2018**
Bangalore, India   (Three months)

Fault detection using multiple principal component analysis

- Designed and published the Multi-PCA algorithm.

UNDERGRADUATE   **September 2018 to June 2019**
RESEARCH   .   (Ten Months)

Traj2Vec: An Inverse Reinforcement Learning algorithm[2]
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)

- Built an Electric skateboard: Designed the radio controller and power delivery system. (2018)

AWARDS

- **Third place at AccelATHON**[3]: 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)

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[2]A list of my projects (with code) can be found here: projects@notion.lakshwin
[3]An intercollegiate hackathon for social innovation.