Arunav Shandeelya

arunavshandilya96@gmail.com

EDUCATION

IIIT BHUBANESWAR

B.Tech in Electrical & Electronics
Minors in Computer Science
Aug 2015 - July 2019

LINKS

Website: **shandilya21.github.io**
Github: **Shandilya21**
LinkedIn: **Arunav Shandilya**

SKILLS

LANGUAGES

Python, C++, Shell, MATLAB and Simulink

FRAMEWORK AND STACK

Git (Intermediate), Linux (Intermediate), PyTorch (Intermediate), TensorFlow (Basics), Keras (Intermediate), Elasticsearch (Basics)

OPEN SOURCE

mlpack [github.com/mlpack/mlpack]
(3000+ stars, 1200+ forks, 176+ contributors)
• Contributing • A fast intuitive open source C++ machine learning library • Part of the non-profit organisation NumFocus.

PROJECTS

Few Shot Learning

[Shandilya21/few-shot-learning]
• Implementation of Few shot, Zero shot learning algorithms such as Prototypical Nets, MAML, etc. to perform image classification using PyTorch.

Deliberation Networks

[github.com/Shandilya21/deliberation.ipynb]
• Implementation of ***NeurIPS*** paper "Deliberation Networks: Sequence Generation beyond One pass Decoding" ***(Xia,Yingce et.al)*** using PyTorch.

ACHIEVEMENTS

• Ranked **171/2000+** participant in **American Express** Machine Learning Hackathon.
• Ranked top **200** out of **5.5K** finalist of **Mckinsey Analytics** Hackathon.
• Ranked 18th on Philips Data Science Coding Hackathon with a score of 96.3/100.

EXPERIENCE

AI-NLP-ML, IIT PATNA | Project Assistant + Main Contributor

Supervisors: Prof. Pushpak Bhattacharyya Professor & Director IIT Patna
Prof. Asif Ekbal Associate Professor, Computer Science IIT Patna
Jul 2019 - Mar 2020
Led projects in the area of natural language processing especially in visual dialog, and multimodal representation learning. Worked on *Reinforcing Character Traits across Personalized Categories in Dialogue Agent*.

PRICEWATER HOUSE COOPERS | Internship

Pratik Goenka Principal Consultant, PwC India
May 2018-Jul 2018
• Worked in *Finance Cockpit*, a decision insight platform based on KPIs (Key Performance Indicators), by significantly improving the efficiency and decision strategy by applying machine learning algorithms. Introduced and implemented alert insight functionality such as trend alert, correlation breakdown, spike alert, etc.

XEROX RESEARCH | Internship

Jun 2016-Aug 2016
• A statistical machine learning model for detecting cancer using thermographic images. Contributed in data pipelines and model setup while studying classical ML algorithms such as SVM, PCA, ANN, FFT, etc.

ACADEMICS PROJECTS

GRADIENT ESTIMATION IN LOW ENTROPY | Mar 2020 | [Short Preview]

• Derive a policy gradient estimator for discrete random distributions using Rao Blackwellization of two existing gradient estimators, combine with REINFORCE for variances reduction in low entropy (low level uncertainty) NLP problems.

ATTRIBUTE CENTERED VISUAL DIALOG | Dec 2019 - Feb 2020

Supervisors: Prof. Pushpak Bhattacharyya Professor & Director, IIT Patna
• Developed a Transformer with GAN based network for an objective of generating images based on attributes in multimodal visual dialog setting. Used low rank fusion method to capture rich visual semantics by taking attribute inference from the text.

INTERPRETABLE MULTIMODAL FUSION | Sept 2019 - Dec 2019

Supervisors: Prof. Pushpak Bhattacharyya Professor & Director, IIT Patna
• Developed a tensor fusion method using block-superdiagonal tensor decomposition, that allows to trade-off the unimodal expressivity and fusion complexity in the learned features.
• Demonstrated a superior performance over linear fusion for personality trait analysis on POM , and IEMOCAP datasets with three modalities, *viz.* textual, visual and acoustic.

PUBLICATIONS

ENHANCING PERCEPTUAL LOSS FOR SUPER RESOLUTION

International Joint Conference on Neural Networks (IJCNN), 2020 | [Paper]
Authors: Akella Ravi Tej, Arunav Shandilya, S. Halder, V. Pankajakshan
• Proposes a novel framework for unifying adversarial and perceptual losses • Filters out the unwanted artifacts introduced by the perceptual loss • Stabilizes adversarial training.