Arunav Shandeelya

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EDUCATION

IIIT BHUBANESWAR
B.Tech in Electrical & Electronics Engineering with minor Specialization in Computer Science
Aug 2015 - July 2019

LINKS

Website: **shandilya21.github.io**
Github: **shandilya21**
LinkedIn: **arunav-shandilya**

SKILLS

LANGUAGES
Python, C++, JavaScript, MATLAB Simulink

FRAMEWORKS AND STACKS
PyTorch, Tensorflow, Keras, Git, GitLab, ElasticSearch, Flask, AWS (S3, SageMaker, Rekognition), Visual Studio, PyCharm

DATABASES
MySQL

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.

Oratio [kpister/oratio]
• An open source pipeline to translate .mp4 video files to .mov video files in 20 different languages.

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

ACHIEVEMENTS

• Ranked **171/2000+** participant in **American Express** Machine Learning Hackathon.
• Ranked **200** out of **5.5K** in **Mckinsey Machine Learning** Hackathon.
• Ranked 18th/1500 in **Philips Innovations** Data Science Coding Hackathon with a score of 96.3/100.

EXPERIENCE

AI-NLP-ML, IIT PATNA | Research Assistant + Main Contributor
Supervisors: Prof. Pushpak Bhattacharyya , Professor IIT Patna
Prof. Asif Ekbal Associate Professor IIT Patna
Aug 2019 - May 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.

LEARNER INC. | Software Development Internship
May 2016-June 2016
• Designed an User Interface for e-course task scheduler (subscribed/Unsubscribed), and integrate with an mobile application.
• Developed e-course content for under privileged students in rural areas.

ACADEMICS PROJECTS

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 taxonomy attribute combined tree's for visual attribute combined with textual features through attention based factorized bilinear pooling approach for fine-grained representation.

INTERPRETABLE MULTIMODAL FUSION | Sept 2019 - Dec 2019
Supervisors: Prof. Pushpak Bhattacharyya Professor & Director, IIT Patna
• Developed a tensor fusion method in PyTorch 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
IEEE 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.