Viraat Reddy Aryabumi

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EXPERIENCE

Core Research Contributor and Community co-lead | Cohere for AI   02/2023 - present
- Core Research contributor for AYA - An Open Science Initiative to Accelerate Multilingual AI Progress
- Replicate existing open-source benchmarks for multilingual LLMs. Developed data pipelines, augmentation techniques and finetuning frameworks.
- Co-lead of the ML-efficiency subfield. Conduct paper-readings and guest lectures.

VP of Systems Intelligence | Aiara Inc.   02/2022 - 05/2023
- Leading ML to deliver value for manufacturers. Operate across all levels of the company.

Machine Learning Scientist | Amazon Development Centre Scotland   05/2019 - 02/2022
- Worked in Sponsored Display, involved world-scale data systems, and deep learning models operating at low latency.
- Delivered multiple experiments that led to double digit growth in the business. Owned the entire process from data collection to productioninzing, and monitoring trained models.
- Supported feature and product launches, improved operational reliability and visibility for the team. Improved knowledge sharing mechanisms and data sharing mechanisms.
- Supervised 6 students from the University of Edinburgh pursuing MSc AI for their MSc thesis. Topics: Memory-Efficient Distributed Representations and Personalizing Recommendation Systems using text.

AI Fellow | Fellowship AI   09/2018 - 12/2018
- 1-cycle learning policy and selective pre-training achieve 83.6% accuracy in Chest X-Ray disease classification.

Coordinator Research Catalogue | Technology Transfer Office, IIIT-H Foundation   01/2017 - 08/2017
- Worked with faculty of 6 AI research centers to identify and develop technology projects with commercial potential. Compiled a research catalogue to facilitate technology transfer and establish relationships with industry.

Assistant Product Engineer | Social Entrepreneurship Lab, Stanford University   7/2014 - 9/2014
- Developed a low-cost, compact demonstration kit for the drip irrigation company Driptech. Development involved multiple design thinking cycles from need-finding to prototyping. Innovated the design for the production demo kit.

COMPUTER SKILLS

Languages: Python, Java, LaTeX
Frameworks/Packages: Pytorch, Huggingface, Spark, Jax, seqio, fastai, ONNX, Tensorflow

EDUCATION

Recurse Center - Programming retreat   08/2023 - 11/2023

University of Edinburgh   08/2017 - 9/2018
MSc., Artificial Intelligence   Distinction

Stanford University Summer Session   06/2016 - 08/2016
Intensive in Technology & Entrepreneurship   Grade: A

Osmania University, Chaitanya Bharathi Institute of Technology   09/2012 - 05/2016
Bachelor's of Engineering, Information Technology   GPA: 4.0 Score: 80.2%

RELEVANT COURSES

Graduate: Machine Learning & Pattern Recognition, Machine Learning Practical, Computational Cognitive Neuroscience, HCI, Reinforcement Learning, Algorithmic Game Theory, The Human Factor, Decision Making in Robots
Summer Session: Data Mining, Leading Trends in IT, Psychology of Technology, Sustainability Design Thinking
Undergraduate: Probability & Random Processes, Databases (DBMS), AI, Distributed Systems
Online: Machine Learning (Coursera), Learning how to learn, fast.ai

RESEARCH

Thesis: Investigating Adversarial learning to achieve Fairness in Images[†]   5/2018 - 8/2018
- Investigated Adversarial learning methods to obtain representations of images such that it is possible to predict a target attribute but difficult to predict a sensitive attribute. Experiments conducted on two synthetic datasets.

Review: Learning to play video games using Deep Reinforcement Learning[†]   11/2017 - 1/2018
- A review of recent advancements in the field of Deep Reinforcement Learning applied to video games in the ALE.

Review: Model Based Reasoning becomes Automatic in humans with training[†]   10/2017 - 12/2017
- Review of decision-making models in humans on the connect between model-based and model-free learning.

PROJECTS

Hindsight Experience Replay | Informatics, University of Edinburgh   5/2018 - 5/2018
- Implemented Hindsight Experience Replay and a bit flipping environment in PyTorch.

Learning to play Super Mario | Informatics, University of Edinburgh   8/2018 - 10/2018
- Train an agent to play Super Mario Bros. in OpenAI Gym using deep reinforcement learning.

Advanced Lane Finding | Self Driving Nanodegree, Udacity   1/2018 - 2/2018
- Implemented a software pipeline to identify the lane boundaries in a video using Computer Vision Techniques.

Vehicle Detection | Self Driving Nanodegree, Udacity   1/2018 - 2/2018
- Implemented Tiny YOLOv2, a Deep learning based approach to detect vehicles in a video stream.

ACTIVITIES

- Won 2nd place at **UnBias Hackathon 2018**
- Contributing author of **Skynet today**: a website providing informed coverage of AI news
- Represented the University of Edinburgh in **British Universities & Colleges Sport Golf**

[†] unpublished