Viraat Reddy Aryabumi

**** +91 9032489699 in linkedin.com/in/viraataryabumi ✓ viraat94@gmail.com

github.com/viraat viraataryabumi.info

EXPERIENCE Research Scholar | Cohere for AI

09/2023 - present

- Release Aya Model, and Aya 23 family of models. Contributed to data, training, and evaluation.
- Work across multilingual, post-training and pre-training.

Core Research Contributor | Cohere for AI

02/2023 - 09/2023

• Core Research contributor for AYA - An Open Science Initiative to Accelerate Multilingual AI Progress

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 productioning, 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.

RESEARCH

Aya 23: Open Weight Releases to Further Multilingual Progress *

• Aya 23 is a powerful family of multilingual LLMs serving 23 languages, expanding state-of-art language modeling capabilities to approximately half of the world's population.

Aya Model: An Instruction Finetuned Open-Access Multilingual Language Model*

Accepted as a Main Conference Oral presentation at ACL 2024

• Our work introduces Aya, a massively multilingual generative language model that follows instructions in 101 languages of which over 50% are considered as lower-resourced.

Thesis: Investigating Adversarial learning to achieve Fairness in Images[†]

• 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.

COMPUTER **SKILLS**

Languages: Python, Java, LATEX

Frameworks/Packages: Pytorch, Huggingface, Spark, Jax, seqio, ONNX

EDUCATION

Recurse Center - Programming retreat

08/2023 - 11/2023

University of Edinburgh MSc., Artificial Intelligence

08/2017 - 9/2018

Distinction

Stanford University Summer Session

06/2016 - 08/2016

Intensive in Technology & Entrepreneurship

Grade: A

Osmania University, Chaitanya Bharathi Institute of Technology Bachelor's of Engineering, Information Technology

09/2012 - 05/2016 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

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.

ACTIVITIES

- Reviewer for EMNLP 2024, and 2023
- Community co-lead at Cohere For AI's ml-efficiency subgroup
- Won 2nd place at UnBias Hackathon 2018
- Represented the University of Edinburgh in British Universities & Colleges Sport Golf

first author † unpublished