Ramnath Kumar

Email ◇ Website ◇ Github ◇ LinkedIn ◇ Scholar

EDUCATION

BITS Pilani, Hyderabad Campus — Hyderabad, India
Masters of Science in Economics — *Aug 2016 – Jun 2021*
Bachelor of Engineering in Computer Science

. Achieved overall distinction in Computer Science courses
. CGPA in Computer Science major: **9.65/10.0** (Top 10 in class of 255)
. Overall CGPA (B.E. Computer Science and Msc. Economics): 8.92/10.0

RESEARCH/WORK EXPERIENCE

Google — Bangalore, India
Research Associate — *Apr 2022 – Present*
. Research Supervisor: Dr. Dheeraj Nagaraj and Dr. Praneeth Netrapalli
. Machine Learning and Optimization Group

Mila - Quebec Artificial Intelligence Institute — Montreal, Canada
Consultant — *Jul 2021 – March 2022*
. Research Supervisor: Prof. Yoshua Bengio
. Topic: Deep learning algorithms; Meta-Learning

Amazon ML — Bangalore, India
Applied Scientist Intern — *Jan 2021 – Jun 2021*
. Mentor: Dr. Gokul Swamy
. Topic: Stochastic Insight into Neural Networks
. Published at Amazon's internal conference (AMLC 2021) as the first author. Worked on causal attributions and their implications on the Amazon sales model.

Mila - Quebec Artificial Intelligence Institute — Montreal, Canada
Research Intern — *Nov 2020 – Apr 2021*
. Research Supervisor: Prof. Samira E. Kahou
. Affiliated University: École de technologie supérieure
. Topic: Theoretical machine learning in the domain of graph neural networks

Qubole — Bangalore, India
Engineer Intern — *Jul 2020 – Dec 2020*
. Mentor: Gururaj Krishnamurthy
. Worked on automating the rollout process (*Frost 2.0*) for the company
. Built a package for monitoring jobs on jenkins, and notify the user on slack upon completion
. Wrote and managed a pipeline which analyses various internal tests, and generates ad statistics and communicated results with the core-qa team

CoCo Lab, Université de Montréal — Montreal, Canada
Research Intern — *Jun 2020 – Nov 2020*
. Research Supervisor: Prof. Karim Jerbi
. Topic: Brain based subject identification using EEG data

Kno.e.sis, Wright State University — Dayton, USA
Research Intern — *May 2019 – August 2019*
. Research Supervisor: Prof. Amit P. Sheth and Prof. Krishnaprasad Thirunarayan
. Topic: eDarkFind: Unsupervised Multi-View Learning for Sybil account detection

. Worked on sybil detection in the darknet markets using an unsupervised multi-view learning framework.
. Worked on object detection models for disaster management.
. Built an image segmentation model to aid the prediction of nutritional data of food.
. Worked on GANs and NLP to detect suicidal posts in *Suicide Watch* and *Mental Health* subreddits.

BITS Pilani, Hyderabad Campus Hyderabad, India
Undergraduate Research Assistant *July 2018 – Jun 2020*

. *Machine Learning in Malware detection in IoT* under Prof. Geethakumari
. *Machine Learning in Astronomy* under Prof. Rahul Nigam
. *Machine Learning in P2P Lending* under Prof. Hussain Yaganti
. *R-Package for Inequality with Ordinal Data* under Prof. Bheemeshwar Reddy

Infibeam Ahmedabad, India
Engineer Intern *May 2018 – July 2018*

. Mentor: Paras Pitroda
. Developed a dynamic portal for UAE to provide various services such as renew the visa, employment letter, etc.
. Created API endpoints for the project to aid easy app deployment.

SELECTED AWARDS/ACHIEVEMENTS

Invitee, *ML Foundations*; Research Week with Google, India 2022

Invitee, Machine Learning Summer School, Taipei 2021

Invitee, Google AI Summer School, India (Acceptance Rate: 1.5%) 2020

Travel Grant, The Web Conference, Taipei (Acceptance Rate: 19%) 2020
(Declined)

Awardee, INSPIRE Scholar (Acceptance Rate: 1%) 2016-2021
(Declined)

Awardee, NTSE Scholar (Awarded to 775 students amongst 0.5 million candidates) 2014-2020

National Olympiad, SOF National Science Olympiad Qualifier (2015), SOF International Math Olympiad Qualifier (2015)

PUBLICATIONS

[1] **Ramnath Kumar**, Tristan Deleu, and Yoshua Bengio. "Rethinking Learning Dynamics in RL using Adversarial Networks". In: *39th International Conference on Machine Learning, ICML*. 2022. **Under Review**.

[2] **Ramnath Kumar**, Tristan Deleu, and Yoshua Bengio. "The Effect of diversity in Meta-Learning". In: *39th International Conference on Machine Learning, ICML*. 2022. **Under Review**.

[3] **Ramnath Kumar**, Tristan Deleu, and Yoshua Bengio. "Effect of diversity in Meta-Learning". In: *NeurIPS Workshop on Meta-Learning*. 2021.

[4] **Ramnath Kumar** and Gokul Swamy. "Stochastic Insight into Neural Networks". In: *Amazon Machine Learning Conference (AMLC), 2021*. AmazonML Internal Conference. 2021.

[5] **Ramnath Kumar**, Shweta Yadav, Raminta Daniulaityte, Francois Lamy, Krishnaprasad Thirunarayan, Usha Lokala, and Amit Sheth. "eDarkFind: Unsupervised Multi-view Learning for Sybil Account Detection". In: *Proceedings of The Web Conference 2020*. 2020, pp. 1955–1965.

[6] **Ramnath Kumar** and G Geethakumari. "Temporal Dynamics and Spatial Content in IoT Malware detection". In: *TENCON 2019-2019 IEEE Region 10 Conference (TENCON)*. IEEE. 2019, pp. 1590–1595.

PROFESSIONAL SERVICE

Reviewer

NeurIPS	2022
ICML	2022
AutoML	2022
NeurIPS, MetaLearn Workshop	2021
ICWSM	2020,2022

RELEVANT COURSEWORK

MATH-F111, Calculus	by K.V. Ratnam
MATH-F112, Linear Algebra	by P.K. Sahoo
MATH-F113, Probability and Statistics	by D.K. Satpathi
MATH-F211, Differential Equations	by T.S.L. Radhika
CS-F320, Foundations of Data Science	by N.L. Bhanumurthy
CS-F407, Artificial Intelligence	by Chittaranjan Hota
CS-F464, Machine Learning	by N.L. Bhanumurthy
CS-F469, Information Retrieval	by Aruna Malapati
Udemy, Deep Learning A-Z	by Kirill Eremenko
Coursera, Neural Networks and Deep Learning	by Andrew NG
Coursera, Improving Deep Neural Networks	by Andrew NG
Coursera, Structuring Machine Learning Projects	by Andrew NG
Coursera, Convolutional Neural Networks	by Andrew NG
Coursera, Sequence Models	by Andrew NG

LANGUAGES

English (Native/Fluent), Hindi (Experienced), Tamil (Experienced), Japanese (Beginner)