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RISHAV RAJ AGARWAL

EDUCATION

University of Waterloo | Canada Sep 2018 - Present

Master of Mathematics, Computer Science

CGPA: 85.6/100

Teaching Assistant: Introduction to Programming in Python, Information Management Systems

Relevant Coursework: Theory of Deep Learning, Advanced Topics in AI, Algorithms

Indian Institute of Technology (IIT) Kanpur | India Jun 2012 – Jun 2016

Bachelor of Science, Economics

CGPA: 7.7/10

Academic Mentor: Fundamentals of Computing

Relevant Coursework: Probability and Statistics, Econometrics, Machine Learning Techniques

PROFESSIONAL EXPERIENCE

Computer Vision Intern | Akasha Imaging | Canada Apr 2020 - Present

- Creating and deploying deep learning solutions for computational imaging and computer vision on propriety datasets.
- Tracking development using JIRA and following Agile methodology.

Research Assistant (Data Science) | Premise Data | Canada Sept 2019 – Apr 2020

- Analyzed multi-year bigdata (>10B entries) and created models of political instability using regression analysis and ML techniques.
- Collaborated remotely with a multi-disciplinary team across three time zones and geographies.

Data Consultant | EXL Services | India Sept 2016 - Aug 2018

- Created cloud based ETL bigdata work streams with Talend and spark pipelines as per business requirements.
- Implemented ML-based media mix predictive models for profitable mailing campaigns for a product portfolio worth USD 0.75M.
- Mentored interns and conducted a training session on data science competitions and machine learning (tree-based models).

Visiting Researcher | Multimedia and Networking Lab, Academia Sinica | Taiwan May 2016 - Jul 2016

- Predicted the propensity to pay bills on time using credit card and phone activity collected from 60,000 individuals over 2 years. | R

Visiting Researcher | School of Communication and Information, Rutgers University | USA May 2015 - Jul 2015

- Analyzed cooperation trends using cell phone-based spatial and temporal data from the Rutgers Wellbeing Study. | R, WEKA

SELECTED PUBLICATIONS

- [Under Review] Rashwan, A, **Agarwal, RR**, Kalra, A, & Poupart, P (2020). MatrixNets: A New Scale and Aspect Ratio Aware Architecture for Object Detection. arXiv preprint arXiv:2001.03194.
- [Accepted CAIAC 2020] **Agarwal RR**, Cohen R, Golab L, Tsang A (2020) Locating influential agents in social networks.
- [Accepted ICBC 2020] **Agarwal RR**, Kumar D, Golab L, Srinivasan K (2020) Consentio: Managing Consent to Data Access using Permissioned Blockchains. arXiv:1910.07110
- **Agarwal RR**, Lin C-C, Chen K-T, Singh VK (2018) Predicting financial trouble using call data—On social capital, phone logs, and financial trouble. PLoS ONE 13(2): e0191863.
- VK Singh, **Agarwal RR**. Cooperative phoneotypes: exploring phone-based behavioural markers of cooperation. In Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing 2016 Sep 12 (pp. 646-657). ACM.

SELECTED PROJECTS

MatrixNets: A Scale and Aspect-Ratio Aware Architecture for Object Detection Sep 2019 - Present

- Co-created a light-weight deep learning module that achieves competitive results on MS COCO object detection task. | Pytorch
- Extending MatrixNets to instance segmentation task using one-stage and two stage architectures (Mask-RCNN).

How Effective are Hypergraph Neural Networks? Jan 2019 - Apr 2019

- Theoretical and experimental analysis of Hypergraph Neural Networks leading to an improved architecture. | TensorFlow

Discovering Influential Nodes in Online Social Networks Sep 2018 - Jan 2019

- Devised a novel AI algorithm to find influential nodes in a social network and tested it on multiple real-world data sets. | Python

AWARDS AND HONOURS

- Received the International Masters Student Award at University of Waterloo. Sep 2018 – Apr 2020
- Received the Client Appreciation award at EXL services. Feb 2018
- Won a spot at the 5th Mega Heritage Photo Exhibition, a pan-India Photography competition. Aug 2017

TECHNICAL SKILLS

Programming: Python (Tensorflow, Pytorch, Numpy, NLTK, Json, Pandas, Scikit-learn) | R |SQL (PostgreSQL) | C++

Tools: Weka | Git | LaTeX | MS Office (Word, Excel, Powerpoint) | AWS | Google Cloud (GCP) | Tableau | Linux