NISHANTH V A

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EDUCATION

McGill University, Montreal, Canada *Sept 2019 -*
PhD in Computer Science
Specialization in Reinforcement Learning

McGill University, Montreal, Canada *Sept 2017 - Sept 2019*
Master's in Science (Thesis) Overall GPA: 3.92/4
School of Computer Science

P.E.S Institute of Technology, Bangalore, India *Sept 2011 - May 2015*
Bachelor's in Engineering Overall GPA: 9/10
Department of Telecommunication Engineering

WORK EXPERIENCE

Fractal Analytics, Bangalore, India *July 2015 - June 2017*
Data Scientist, Artificial Intelligence and Machine Learning Team
Researching and developing AI and ML based solutions to solve business problems presented by our clients.

RESEARCH EXPERIENCE

McGill University and Mila, Montreal, Canada *Jan 2018 - Present*
Temporal aspects of Reinforcement Learning with Prof. Doina Precup
Working on temporal credit assignment and temporal regularization in Reinforcement Learning.

Crucible of Research and Innovation, Bangalore, India *Sept 2013 - May 2015*
Applications of Relevance Vector Machines
Worked on applications of Relevance Vector Machines in regression, classification and compression.

PUBLICATIONS

- Pierre Thodoroff*, **Nishanth Anand***, et.al., **Recurrent Value Functions**, RLDM 2019.
- Pierre Thodoroff*, **Nishanth Anand***, et.al., **Recurrent Learning for Reinforcement Learning**, SPiRL workshop, ICLR 2019.

ACADEMIC PRESENTATIONS

- **V. A. Nishanth**, J. Manikandan. 'Sparse representation using optimum threshold based relevance vector machine'. 12th Annual IEEE India Conference (INDICON). 17-20 December 2015. Delhi, India.
- **V. A. Nishanth**, J. Manikandan. 'SAR Image Compression using Relevance Vector Machines'. 12th Annual IEEE India Conference (INDICON). 17-20 December 2015. Delhi, India.
- Karthik HS, **Nishanth V A**, Manikandan J. 'Stock Market Prediction using Optimum Threshold based Relevance Vector Machines'. 22nd Annual International Conference on Advanced Computing and Communications (ADCOM). 8-10 September 2016. Bangalore, India.

PROJECTS

Temporal credit assignment and Temporal regularization
Working on techniques to address the problem of credit assignment and regularization in my PhD. Developed a technique to maintain temporal consistency in value space. Currently working on estimating the value function in a novel way that has a better temporal credit assignment properties.

Optimizing campaign management
Developed a reinforcement learning model for a financial firm which assists in targeted campaigning. With this technique, customers received personalized offers which increased the sales up to 10%.

High Frequency Store Analysis
Implemented a forecasting model for inventory replenishment at stores using support vector machines and artificial neural networks. The algorithm ensured the inventory is never out of stock while accounting for the storage costs.

Regression and Classification using Relevance Vector Machine
An optimum threshold-based pruning for relevance vector machines was introduced. This technique reduced the relevance vectors considerably ensuring good accuracy. The technique was evaluated on both regression and classification datasets.

TECHNICAL STRENGTHS

Computer Languages	Python, C, MATLAB, R
Others	Excel, VLSI, Assembly language

RELEVANT COURSES

McGill University: Reinforcement Learning, Machine Learning, Probabilistic Graphical Models, Mathematical Foundations for Machine Learning, Theoretical Principles of Deep Learning, Probabilistic Analysis of Algorithms, Matrix Computation.

P.E.S Institute of Technology: Information theory, Signals and Systems, VHDL, Wireless Communications, Micro controllers, Control Systems, Linear Algebra, Calculus, Probability.

ACHIEVEMENTS

- Secured a rank of **1595** in KCET, a state level engineering entrance exam of Karnataka.
- MHRD - a Government of India scholarship recipient for 3 years.

EXTRA CURRICULAR

- **Teaching Assistant** for Machine Learning (Fall 2018), Algorithms and Data Structures (Winter 2018), and Intro to Operating Systems (Fall 2017).
- Actively involved in different clubs which organize events.
- Active participant of technical seminars and entrepreneurship events.

PERSONAL INFORMATION

Languages: English, Kannada, Hindi, Telugu
Nationality: India
Hobbies: Chess, Cooking, Board games