Duc Le | Resume

Ph.D. in Computer Science – Halifax, Nova Scotia, Canada

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Motivated data scientist with a demonstrated ability to deliver valuable insights via data analytics. Skilled in Machine Learning, Data Analytics, Evolution Computation, Anomaly Detection, and Intrusion Detection. Ph.D. in Computer science focused on machine learning and applications in network security and threat detection.

Experience

Dalhousie University Halifax, NS, Canada
Research Associate *09/2021–present*
– Research focusing on machine learning and its robustness and transparency for networks and security applications.

Micro Focus Halifax, NS, Canada
Mitacs Accelerate Research Intern *02/2021–09/2021*
– Developed data processing techniques to enable machine learning on CrowdStrike Falcon Sensor Logs.
– Performed ML-based anomaly detection for identifying insider threats in large real-world logs data.

NIMS lab, Faculty of Computer Science, Dalhousie University Halifax, NS, Canada
Graduate Research Assistant *09/2015–08/2021*
– Conducted research in the areas of: Machine Learning for Insider threat detection and Intrusion detection, Evolutionary computation.
– Developed novel algorithms and ML-based frameworks for detecting insider threats from heterogeneous data, which demonstrated high detection accuracy and robustness.
– Participated in industry-collaborated projects in anomalous network traffic detection, data leakage investigation using ML (2Keys inc.), and firewall evaluation (Cisco AMP).
– Wrote and published research papers on academic conferences and journals.

Kavi Systems (start-up) Halifax, NS, Canada
Machine learning engineer *02/2019–05/2019*
– Developed rock type classification product demo (MVP) based on Tensorflow object detection models. Deployed the product in a constrained environment for live detection.

Faculty of Computer Science, Dalhousie University Halifax, NS, Canada
Teaching Assistant *09/2016–12/2020*
– Learning Center and Courses: Network Design and Management, Design and Analysis of Algorithms.
– Designed and taught labs and tutorials, implemented course projects, both in a physical networking lab and virtually.

NIMS lab, Faculty of Computer Science, Dalhousie University Halifax, NS, Canada
Mitacs Globalink Research Intern *06/2014–08/2014*
– Networks and Systems Behaviour Analysis. Analyzing & evaluating botnet detection systems, such as BotHunter & Snort.

Education

Dalhousie University Halifax, NS, Canada
Ph.D. in Computer Science *09/2017–08/2021*
Supervisors: Dr. Nur Zincir-Heywood and Dr. Malcolm Heywood
Thesis: A machine learning based framework for user-centered insider threat detection

Dalhousie University Halifax, NS, Canada
Master of Computer Science *09/2015–04/2017*
Supervisors: Dr. Nur Zincir-Heywood and Dr. Malcolm Heywood.
Thesis: An unsupervised learning approach for network and system analysis. GPA: 4.25/4.3

Posts and Telecommunications Institute of Technology (PTIT) Hanoi, Vietnam
Bachelor of Electronics and Telecommunications Engineering *09/2010–01/2015*
GPA: 9.11/10, ranked 2th/400 in the graduation class of 2015. In Dean's list 9/9 semesters.

Awards and Honors

- Izaak Walton Killam Predoctoral Scholarship 2018 – 2021
- Nova Scotia Graduate Scholarship 2015 – 2021
- The President's Award, Dalhousie University 2017 – 2019
- Best Paper Award - ACM Genetic and Evolutionary Computation Conference 2018
- Mitacs Globalink Fellowship, Canada 2015 – 2018
- Hanoi city Valedictorian Prize, Hanoi, Vietnam 2015
- Mitacs Globalink Research Internship Award, Canada 2014
- Second prizes, The 20th & 21st Vietnam Mathematics Olympiad for University Students 2012 – 2013
- Awards for the highest score in the university entrance exam, 2010
  Vietnam ministry of Education and Training, Vietnam Student Association, PTIT

Skills

Languages: *English* – Full professional proficiency, *Vietnamese* – Native

Computer skills

Certificates: *Microsoft Azure* – AI Engineer Associate, Data Scientist Associate, Data Engineer Associate.
Coursera & UC Davis – Distributed Computing with Spark SQL
Coursera & Google – Data Analytics Professional Certification.
Coursera & DeepLearning.AI – Deep learning Certification.

Languages: Python, MATLAB, Java, R, SQL, C++

Libraries and Tools: Tensorflow, Keras, Scikit-learn, Pandas, Matplotlib, WEKA, Docker

Others: Tableau, LaTeX, Linux, Windows, Microsoft Office/Openoffice suite

Job skills

- Machine learning & Statistics, in particular unsupervised neural networks and evolution computation.
- Data analytics and visualization.
- Network monitoring & management, Firewalls (Cisco ASA, NFSense/OPNSense) and Intrusion detection.
- Cybersecurity, Offensive security.
- Technical writing and publishing, technical presentation.
- Analytical thinking, problem-solving skills.

Recent Research Publications

6. D. C. Le and N. Zincir-Heywood. Anomaly detection for insider threats using unsupervised ensembles. IEEE Transactions on Network and Service Management, 18(2):1152–-1164, June 2021.
5. D. C. Le, A. N. Zincir-Heywood, and M. I. Heywood. Training regime influences to semi-supervised learning for insider threat detection. In IEEE Security and Privacy Workshops, 2021.
4. D. C. Le and N. Zincir-Heywood. A Frontier: Dependable, Reliable and Secure Machine Learning for Network/System Management. Journal of Network and Systems Management, 28(4):827–-849, Oct. 2020.
3. D. C. Le and N. Zincir-Heywood. Exploring anomalous behaviour detection and classification for insider threat identification. International Journal of Network Management, 31(4), Mar. 2020.
2. D. C. Le, N. Zincir-Heywood, and M. I. Heywood. Analyzing data granularity levels for insider threat detection using machine learning. IEEE Transactions on Network and Service Management, Mar. 2020.
1. D. C. Le, S. Khanchi, N. Zincir-Heywood, and M. I. Heywood. Benchmarking evolutionary computation approaches to insider threat detection. In ACM Genetic and Evolutionary Computation Conference, Kyoto, Japan, July 2018. **Best paper award** - Real world applications track.