

Dr Bo Dao

Research Contractor, RMIT University & Telstra Corp.
Teaching Associate, Faculty of Information Technology, Monash University.
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Curriculum Vitae

Research Summary

Dr Dao is a research data scientist with 5+ years experience in various strategic research approaches. He is currently a teaching associate at Faculty of Information Technology, both Monash University and Deakin University as well as a research associate in joint project of RMIT University & Telstra Corp. Australia. He obtained a Ph.D. degree in Information Technology with a strong background on applied machine learning, social media analysis, and health analytics at Centre for Pattern Recognition and Data Analytics (PRaDA), Deakin University, Australia. He was a postdoctoral research assistant at PRaDA, Deakin University. With strong experience in several machine learning methods, such as Random Forests, Lasso, K-means, Bayesian Nonparametric Topic Models, to name a few, he is enthusiastic to bring his experience in machine/deep learning, data science and analytics into solving exciting real-world problems. Specifically, his research interests are:

Education and Qualifications

2012 - 2016	Doctor of Philosophy (Data Science and Advanced Analytics) , Deakin University, Australia. Doctorate thesis: <i>Social Media as Sensors for Healthcare: A Machine Learning Approach.</i>
2006 - 2008	Master of Science and Technology Education , La Trobe University, Australia. Minor thesis: <i>An Evaluation on Current XML Twig Pattern Matching Algorithms.</i>
1995 - 2000	Bachelor of Science (Computer Science) , Hanoi University of Science, Vietnam. Thesis: <i>Sufficient Conditions for Eulerian and Hamiltonian Cycles.</i>

Employment

2019-present	Junior Research Scientist , Credit AI, Melbourne, Australia (Parttime) Research Associate in Data Analytics , Joint project of RMIT University & Telstra Corp., Australia.
2018-present	Sessional Teaching Associate , Faculty of Information Technology, Monash University, Australia.
2017-present	Casual Academic , School of Information Technology, Deakin University, Australia.
2016 - 2017	Postdoctoral Research Assistant , Pattern Recognition and Data Analytics, Deakin University, Australia.
2008 - 2012	Senior Lecturer & Acting Dean , Faculty of Information Technology, Binh Dinh College, Vietnam.
2001 - 2008	Lecturer and IT Developer , Binh Dinh Teacher's Training College, Vietnam.

Teaching Experience

@RMIT University, Melbourne, Australia

- COSC2196 - Introduction to Information Technology - SP 3 2019

@Monash University, Melbourne, Australia

Prepare and deliver tutorials/practicals on class/online via MOODLE system for Master Data Science's units.

- FIT9136 - Algorithms and Programming foundations in Python (Tutorials), S1-2020
- FIT5147 - Data Exploration and Visualization (Tutorials), S1-2018, S1-2019
- FIT5196 - Advanced Data Analysis (Tutorials), S2-2018
- FIT5196 - Data Wrangling (Tutorials), S1-2018, S2-2018
- FIT5197 - Modelling for Data Analysis (Tutorials), S1-2018

@Deakin University, Melbourne, Australia

Prepare and deliver tutorials/practicals on class/cloud via CLOUDDEAKIN system. Met all thresholds of the university for teaching evaluation by each unit's students.

- SIT718 - Real World Analytics (Tutorials), T3-2019, T1-2020, T2-2020
- SIT773 - Software Requirements Analysis and Modelling (Tutorials), T2-2019
- SIT717 - Enterprise Business Intelligence (Routine marking), T2-2019, T2-2020
- SIT205 - Thinking Systems and Cognitive Science (Practicals), T2-2017, T2-2018
- SIT232 - Object-Oriented Development (Practicals), T1-2018
- SIT204 - Mathematics and Physics for Games (Tutorials - Marking), T1 2018
- SIT221 - Data Structures and Algorithms (Practicals), T2, 2017

Publications

Refereed Journal Articles

- **Dao, B.**, Nguyen, T., Venkatesh, S. and Phung, D. Latent Topic Modelling and Nonparametric Discovery of Online Mental Health-related Communities. *Journal of Data Science and Analytics*, 4(3), 209-231, 2017.
- Nguyen, T., Phung, D., **Dao, B.**, Venkatesh, S., and Berk, M. Affective and content analysis of online depression communities. *IEEE Transactions on Affective Computing*, 5(3), 217-226, 2014. (5-year IF: 3.187).

Conference Refereed Papers

- Van M-H, Nguyen H-H, **Dao, B.**, Nguyen, A-K, and Mai, T-T. Predicting cryptocurrency price movements based on social media. *International Conference on Advanced Computing and Applications*, pp. 57-64, 2019.
- Nguyen T-V, Nguyen, A-K, Le, L-S, and **Dao, B.** Leveraging Blockchain in Monitoring SLA-oriented Tourism Service Provisioning. *International Conference on Advanced Computing and Applications*, pp. 42-50, 2019.
- Ton, L-P., Le, L-S., Pham, H-A., and **Dao, B.** Monitoring IoT Objects in Wearable Applications: An Alloy-Based Approach. *International Conference on Advanced Computing and Applications*, 2018.
- Ton, L-P., Pham, H-A., and **Dao, B.** Software Abstraction for Casual Games Using Temporal Model: An Alloy-based Approach. *International Conference on Advanced Computing and Applications*, 2017.
- **Dao, B.**, Nguyen, T., Venkatesh, S., and Phung, D. Discovering Latent Affective Transitions among Individuals in Online Mental Health-related Communities. *IEEE International Conference on Multimedia and Expo*, 2016.
- **Dao, B.**, Nguyen, T., Venkatesh, S., and Phung, D. Effect of Social Capital on Emotion, Language Style and Latent Topics in Online Depression Community. *IEEE-RIVF International Conference on Computing and Communication Technologies*, 2016. **Best Runner-Up Student Paper Award.**
- **Dao, B.**, Nguyen, T., Venkatesh, S., and Phung, D. Nonparametric discovery of online mental health-related communities. *International Conference on Data Science and Advanced Analytics*, 2015.
- **Dao, B.**, Nguyen, T., Phung, D., and Venkatesh, S. Effect of mood, social connectivity and age in online depression community via topic and linguistic analysis. *International Conference on Web Information System Engineering*, 2014.
- **Dao, B.**, Nguyen, T., Venkatesh, S., and Phung, D. Analysis of circadian rhythms from online communities of individuals with affective disorders. *International Conference on Data Science and Advanced Analytics*, 2014.
- Nguyen, T., **Dao, B.**, Phung, D., Venkatesh, S., and Berk M. Online social capital: Mood, topical and psycholinguistic analysis. *International AAAI Conference on Weblogs and Social Media*, 2013.
- Tran, T.T. and **Dao, B.** Querying semi-structure based on matching scheme. *National Conference on Information Technology and Communication (@ICT)*, Vietnam, 2008.
- **Dao, B.** and Cao, J. A Glance on Current XML Twig Pattern Matching Algorithms. *International Conference for Computational Science and Its Applications*, 307-321, 2008.

Professional Training

2017 *SummerViz 2017* - 1st Australian Summer School on Data Visualization, Monash University.

2015 Online courses: *Machine Learning*; *Text Mining and Analytics*; and *other Data Science Courses*.

2008 High Level Training on Free and Open Source Software Strategies and Management (8 months).

Skills

- **Programming languages:** Matlab, Python, R (proficient), C#, Java, JS, PHP, HTML (familiar), SAS (little familiar)
- **Database Tools:** SQL Server, SQLite, MySQL, Oracle DB, and NoSQL: XML, JSON.
- **Machine learning:** Clustering methods; Topic models; Classification; Predictive models.
- **Data Science:** Data visualization (Gephi, D3, Matlab, R and Python); Data exploration; Pattern recognition.
- **Languages:** Vietnamese (native) and English (proficiency).
- **Strengths:** Working independently; Teamwork player; Quick learner; and Good communication.

Honors/Awards

2016 *Best Runner-Up Student Paper Award*, IEEE RIVF 2016, Hanoi, Vietnam.

2015 *IEEE Computational Intelligence Society (CIS) Travel Grant Award*, US\$ 800.

2013 *Full PRaDA Postgraduate Research Top-up Scholarship*, Deakin University (3 years).

2012 *Full International Postgraduate Research Scholarship*, PhD degree at Deakin University (4 years).

2005 *Full ADB-MOET Scholarship for Master course* at La Trobe University, Australia (2,5 years).

Professional Services

- Journal Reviewer: IEEE Transactions on Affective Computing (2017, 2020); SN Computer Science (2019, 2020); Journal of Data Science and Analytics (2019, 2020).
- Conference Reviewer: Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2018.
- TPC Member: International Conference on Advanced Computing and Applications (ACOMP), 2017, 2018, 2019, 2020.

Security and Safety Checks

I have obtained a valid working children (WWC) check card for five years until 2022.

References

- *Professor Dinh Phung*, (Co-Principal Supervisor)
Faculty of Information Technology, Monash University,
Tel: +61 3 9905 6955 | Email: dinh.phung@monash.edu
 - *Dr Thin Nguyen*, (Principal PhD Supervisor)
Senior Research Fellow, Applied Artificial Intelligence Institute, Deakin University, Australia,
Tel: +61 3 5247 9717 | Email: thin.nguyen@deakin.edu.au
 - *Dr Thanh Thi Nguyen*, (Teaching Supervisor)
Senior Lecturer, School of Information Technology, Deakin University,
Tel: +61 3 5227 8281 | Email: thanh.nguyen@deakin.edu.au
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