MATTHEW **PEIZHI YAN**

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EDUCATION

- **University of British Columbia** (2021 -)
Vancouver, British Columbia, Canada — ***Ph.D. Student*** *in Electrical and Computer Engineering*

- **Lakehead University** (2018 - 2020) GPA: 4.0 / 4.0 (Average Grade: 98%)
Thunder Bay, Ontario, Canada — ***M.Sc.*** *in Computer Science (Governor-General's Gold Medal)*

- **Algoma University** (2016-2018) GPA: 4.0 / 4.0 (Average Grade: 96%)
Sault Ste. Marie, Ontario, Canada — ***B.Sc.*** *in Computer Science (Honors, Cum Laude)*

- **University of Jinan** (2014-2019), Jinan, Shandong, China — ***B.Eng.*** *in Computer Science*

TEACHING EXPERIENCE

Lakehead University

- **Guest Lecturer (9 hours):** *Optimization Method (2020 Spring),* graduate-level course, 29 students
- **Guest Lecturer (6 hours):** *Deep Learning (2020 Winter),* graduate-level course, 83 students
- **Guest Lecturer (6 hours):** *Computer Vision (2019 Fall),* graduate-level course, 70 students
- **Guest Lecturer (9 hours):** *Deep Learning (2019 Spring),* graduate-level course, 59 students
- **Guest Lecturer (6 hours):** *Optimization Method (2019 Spring),* graduate-level course, 19 students
- **Tutor:** *Assembly Language (2019 Winter),* undergraduate-level course, 38 students
- **Tutor**: *Data Base Management Systems (2018 Fall),* undergraduate-level course, 25 students

ACADEMIC EXPERIENCE

Journal Reviewer

- **Elsevier** *Neurocomputing* (2 reviews submitted)
- **IEEE** *Transactions on Cybernetics* (1 review submitted)
- **IEEE** *Access Journal* (1 review submitted)
- **IEEE** *Transactions on Circuits and Systems for Video Technology* (4 reviews submitted)
- **IEEE** *Canadian Journal of Electrical and Computer Engineering* (4 reviews submitted)

Conference Reviewer

- 2021 IEEE International Conference on Image Processing
- 2020 The 17th IEEE International Conference on Ubiquitous Intelligence and Computing

Other

- **Research Assistant**, The University of British Columbia (2021-)
- **Graduate Assistant**, Lakehead University (2018-2020)
- **Research Assistant** at Brain Computer Interface lab, Algoma University, Canada (2017-2018)
- **Vice President** of Software Development Sector of Turing Computer Association, University of Jinan, China (2015-2016)

PUBLICATION

Journal

1. Tassone, J., **Yan, P.**, Simpson, M., Mendhe, C., Mago, V., & Choudhury, S., "Utilizing Twitter Data Analysis and Deep Learning to Identify Drug Use". *BMC Medical Informatics and Decision Making*, *20*(11), 1-15. (SCI Journal, IF: 3.546)
2. **Yan, P.**, Al-Turjman, F., Al-Oqily, I., & Choudhury, S. "An Energy-Efficient Topology Control Algorithm for Optimizing the Lifetime of Wireless Ad-hoc IoT Networks in 5G and B5G". *Computer Communications.* Elsevier. (SCI Journal, IF: 3.923)
3. **Yan, P.**, Choudhury, S., & Wei, R. "A Machine Learning Auxiliary Approach for the Distributed Dense RFID Readers Arrangement Algorithm"*. Intelligent and Cognitive Techniques for Internet of Things, IEEE Access Journal,* 2020*.* (SCI Journal, IF: 5.456)
4. **Yan, P.**, & Feng, Y. "Using Convolution and Deep Learning in Gomoku Game Artificial Intelligence". *Modern Physics Letters A*, 28(03), 2018. (SCI Journal, IF: 1.367)

Conference

5. **Yan, P.***, & Choudhury, S., "Optimizing Mobile Edge Computing Multi-Level Task Offloading via Deep Reinforcement Learning". In *ICC 2020-2020 IEEE International Conference on Communications (ICC)*. IEEE. 2020.
6. Emu, M., **Yan, P**.*, Choudhury, S., "Latency Aware VNF Deployment at Edge Devices for IoT Services: An Artificial Neural Network Based Approach". In *ICC 2020-2020 IEEE International Conference on Communications (ICC) on Convergent IoT*. IEEE. 2020
7. **Yan, P.***, Choudhury, S., & Wei, R. "A Distributed Graph-Based Dense RFID Readers Arrangement Algorithm". In *ICC 2019-2019 IEEE International Conference on Communications (ICC)* (pp. 1-6). IEEE. May, 2019.
8. **Yan, P.***, & Feng, Y. "A Hybrid Gomoku Deep Learning Artificial Intelligence". In *Proceedings of the 2018 Artificial Intelligence and Cloud Computing Conference* (pp. 48-52). ACM. December, 2018.

* indicates the presenter.

Submitted

9. **Yan, P.** [c], Paul, A. [c], Yang, Y., Zhang, H., Du, S & Wu, J., "Online Sequential Learning with Non-Iterative Strategy for Dimension Reduction and Image Classification", submitted to *Springer Neural Computing and Applications.*
10. **Yan, P.**, & Choudhury, S., "Deep Q-Learning Enabled Joint Optimization of Mobile Edge Computing Multi-Level Task Offloading", submitted to *Elsevier Computer Communications*.
11. Liu, Y., Liu, M., **Yan, P.**, Lu, W., Liu, R., & Du, S., "No-reference Stereoscopic Image Quality Assessment by Combining Global and Local Features", submitted to *IEEE Transactions on Consumer Electronics*.
12. **Yan, P.**, Jiang, T., Du, S., & Liu, Y., "A Distortion Type Prediction Based Full-Reference Image Quality Assessment Scheme", submitted to *International Journal of Pattern Recognition and Artificial Intelligence.*

[c] indicates co-first authorship.

AWARDS AND HONORS

Canada

- (2020) **The Governor-General's Gold Medal Award**
- (2018) **Vector Scholarship in Artificial Intelligence (VSAI)** by Vector Institute, $17,500

University of British Columbia

- (2021) Faculty of Applied Science Graduate Award
- (2021) International Tuition Award

Lakehead University

- (2019) International Match Fund Award
- (2019) CUPE Professional Development Bursary
- (2019) Faculty of Science and Environmental Studies Award
- (2018, 2019) Graduate Assistantship

- (2018, 2019) Faculty Research Award
- (2018) Graduate Travel Award
- (2018) Lakehead University Entrance Award
- (2018) Lakehead University International Entrance Award
- (2018) Faculty of Science and Environmental Studies Entrance Award

PROJECT

Research

- (2019-2020) **Deep Learning Satellite Image Lichen Mapping** (funded by the Natural Sciences and Engineering Research Council of Canada)
- (2019) Deep Learning 4X Video Super-Resolution (https://www.youtube.com/watch?v=W8TxAPylE0Y)
- (2018-2019) Utilizing Twitter Data Analysis and Deep Learning to Identify Drug Use
- (2018) Deep Learning Portrait Mode Photo Generator
- (2018) Distributed Dense RFID Readers Arrangement Algorithm
- (2017-2018) Undergraduate Thesis: Using Machine Learning in Gomoku Game

Other

- (2021, Ongoing) **ZenFlow** Open-Source Machine Learning Library (https://github.com/PeizhiYan/zenflow)
- (2019) BPPV Mobile App for Healthcare Practice (Android and iOS)
- (2019) Open-Source **Whiteboard Web App.** (https://peizhiyan.github.io/www/draw.html)
- (2019) Tensorflow Implementation of Extreme Learning Autoencoder (https://github.com/PeizhiYan/ELA)
- (2018) Convolution-Based **Gomoku Game AI** (https://peizhiyan.github.io/js_codes/gomoku/index.html)

SUPERVISED STUDENT

- **Md Nafis Abedin** (Co-op undergraduate student at University of Waterloo, 2020 summer intern)
  Project: Developing an interactive web user interface for the satellite image lichen mapping project.

SKILL

- **Programming Languages:** Python, Java, C++, C, JavaScript, HTML5, CSS3
- **Open-Source Libraries:** OpenCV, Tensorflow, PyTorch, Keras, Gurobi, Paper.js
- **Others:** LaTeX, Xcode, Linux, Matlab, SLURM Workload Manager, Adobe Photoshop, Adobe Illustrator
- **Hobbies:** Visual Art**,** Oil Painting

Updated on April 3, 2021