PYAE PYAE PHYO

PERSONAL DATA

Gender: Female

Date of Birth: 15 April 1993

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HIGHLIGHT OF QUALIFICATIONS

Technical Software Skills: Microsoft Office Products including MS Azure, GitHub, Matlab, RapidMiner, Mathematica, Computer Graphic, LaTex.

Programming Skills: Python, R, MySQL, HTML, CSS, Javascript.

Data Analytical Skills: Conducted many projects using different data including renewable and nonrenewable energy, electricity load, weather, battery, and agricultural data.

Communication Skills:

- Attended many international programs such as conferences, summer schools, camps, workshops, and seminars.
- Performed and experienced different research from joining many exchange and internship programs at international universities.

Problem-Solving Skills:

- Accomplished many projects, including energy, battery, and agriculture, and provided hands-on projects demanded by industries at Jeju university.
- Well-handled the needs and solved the problems of my graduate research and professional experiences.

Teamwork Skills:

- Performed as a leader with a team of 4 for Hackathon 2022 at TU/e university and obtained the winner award.
- Performed as a team member of the graduate research team at SIIT university to achieve the relevant journal paper.
- Conducted a senior solar project with a junior of 5 during my graduate studies and guided them to execute the conference paper.

Commitment and Time Management Skills: Well-performed all projects within the given timeline according to the requirement of professors, employers, and industries.

Language Skills: Burmese, English, Japanese, and Korean.

EDUCATION BACKGROUND

Ph.D. in Engineering and Technology Dec 2017–Nov 2021

Sirindhorn International Institute of Technology, Thammasat University, Thailand.

Visiting Researcher Aug 2019–Jan 2020

University of Calgary, Canada.

M.Sc. in Engineering and Technology Dec 2015–Dec 2017

Sirindhorn International Institute of Technology, Thammasat University, Thailand.

B.Eng. in Electrical Power 2008–2013

Technological University Mandalay, Myanmar.

PROFESSIONAL EXPERIENCES

Postdoc Researcher: Conducting electricity market game (EMGA) platform including prediction and optimization of electricity market price at the Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands. (May 2022-Present)

ML Researcher: Conducted energy prediction, vegetable price prediction, and battery level classification projects at the Machine Learning Laboratory of Jeju National University in South Korea and published relevant journal papers about the accomplished tasks. (Jul 2021-Apr 2022)

Teaching Assistant: Assisted in many undergraduate courses such as Python Programming (ITS100), Algorithms and Object-oriented Programming (MTS280), Database course (ITS351), and Computer Graphics and Applications (CSS221) at SIIT, Thammasat University, Thailand. (Apr 2017–May 2021)

Research Assistant: Assisted the research and projects under the supervision of my graduate advisor at SIIT, Thammasat University, Thailand. (Jan 2017–Dec 2020)

OTHER EXPERIENCES

Visiting Researcher (EPFL Switzerland): Visiting as a Postdoc Researcher and conducting Wind Energy Forecasting at Wind Engineering and Renewable Energy Laboratory (WiRE), School of Architecture, Civil and Environmental Engineering (ENAC), École Polytechnique Fédérale de Lausanne (EPFL), Switzerland. (Oct 2023-Nov 2023)

Visiting Researcher (UoC Canada): Visited as a Researcher and accomplished tasks on Industrial Load Forecasting at the Department of Electrical and Computer Engineering, University of Calgary, Canada. (Aug 2019-Jan 2020)

Mentee: Attended as a Mentee at Asian MLC 2018 at the Jeju National University in South Korea and published one journal paper about the accomplished tasks from the camp. (Jul 2018-Aug 2018)

Dorm Coordinator: Served as a Dorm Coordinator for International Students at SIIT International Residence Hall, Thailand. (Aug 2018-Jul 2019)

Guide Teacher: Worked as a Guide Teacher in all courses of Electrical Power Engineering for undergraduate students and also supervised the students in academic and research projects in Myanmar. (2009-2015)

PROFESSIONAL DEVELOPMENT

Guest Editor: Serving the Special Issue entitled Frontier in Industrial IOT, Networks, Big Data, and Renewable Energy in Electronics Journal (ISSN 2079-9292|). https://lnkd.in/eUMqcjRU

Committee Member: Organized 5th International Conference on Smart Energy Systems and Technologies (SEST 2022) at TU/e in Eindhoven, The Netherlands.

Forecasting Workshop: Attended the "Deep Learning for Forecasting" workshop conducted by Amazon at the International Symposium on Forecasting, 2020.

AWARDS AND SCHOLARSHIPS

Research Visiting Award: Awarded from EUROTECH Visiting Research Program to visit and conduct the research at Wind Engineering and Renewable Energy Laboratory (WiRE), School of Architecture, Civil and Environmental Engineering (ENAC), École Polytechnique Fédérale de Lausanne (EPFL), Switzerland. (Oct 2023-Nov 2023)

Winner Award: Awarded winner at Hackathon 22 The Future of Household Energy Consumption at TU/e, Eindhoven, The Netherlands. (11-12 Jun 2022)

Forecasting Summer School: Accepted to attend International Symposium on Forecasting Summer School about Renewable Energy Forecasting, 2020.

Canada-ASEAN SEED Scholarship: Awarded a Canada-ASEAN SEED scholarship (2019-2020) award at the University of Calgary, Calgary, Canada, 2019-2020.

Excellent Foreign Student scholarship (EFS): cEFS scholarship at SIIT, Thammasat University for Ph.D. and Master Programs, 2015-2020.

Machine Learning Camp (Fully Funded): Participated as a mentee at Asian Machine Learning Camp 2018 (Asian MLC 2018) in Jeju, South Korea.

AIM-HI intern (Fully Funded): Selected as a research intern at Advanced Institute of Manufacturing with High-Tech Innovations (AIM-HI), National Chung Cheng University, Taiwan, 2019.

Best Presentation Award: Best presentation award at the 8th International Conference on Information and Communication Technology for Embedded System, ICICTES-2017.

Japanese Language: Awarded first prize for Japanese Language (Elementary) at Hito Center, Mandalay, Myanmar, 2015.

RESEARCH INTERESTS

- Artificial Intelligence, Machine Learning, Deep Learning
- Predictive Analytic, Time Series Analysis, Data Classification, and Clustering
- Operation, Planning, and Economics of the electric energy systems
- Electricity Markets: Modelling and Optimization, Power System Analysis and Optimization, Renewable Energy

RESEARCH PUBLICATIONS

Conference Papers.....

"Rule-based Classification and Outlier Replacement for Daily Electricity Load Forecasting", E. T. T. Tun, P. P. Phyo, C. Jeenanunta, The 15th IEEE PES ASIA-PACIFIC Power and Energy Engineering Conference (APPEEC 2023) on December 6-9, 2023 at Le Méridien Hotel, Chiang Mai, Thailand. https://ieee-appeec.org/

"Nationwide Energy and Peak Demand Forecasting: A Case Study in Thailand", M. N. Shwe, P. P. Phyo, C. Jeenanunta, , The 15th IEEE PES ASIA-PACIFIC Power and Energy Engineering Conference (APPEEC 2023) on December 6-9, 2023 at Le Méridien Hotel, Chiang Mai, Thailand. https://ieee-appeec.org/

"Behavior of Vehicle Platoon with Limited Output Information Based on Constant time Heading", A. Prayitno, V. Indrawati, and **P. P. Phyo** in the 4th Bi-Annual International Conference on Informatics, Technology, & Engineering (InCITE 2023), September 14-15, 2023 at eastparc Hotel, Indonesia. https://conference.ubaya.ac.id/incite2023

"Deep Neural Network for Short-Term Electricity Load Forecasting", C. Jeenanunta and **P.P. Phyo** in the 8th International Conference on Information and Communication Technology for Embedded System, ICICTES-2017, pp.165-170, Bangkok, Thailand. (Published in May 2017) (Best Presentation Award)

"Electricity Load Forecasting in Thailand Using Deep Learning Models", **P.P. Phyo**, C. Jeenanunta and K. Hashimoto, 2018 The International Conference on Renewable Energy and Power Engineering (IEEE REPE 2018), 24-26 November 2018, Toronto, Canada, pp 47-52.

"Feature Engineering in Long Short-Term Memory and Deep Belief Network for Daily Electricity Load Forecasting", **P.P. Phyo** and C. Jeenanunta. (Accepted in the 40th International Symposium on Forecasting, Brazil, Oct 26-28 2020)

Phyo, P.P.; Byun, Y.-C, "Data-Driven Heterogenous Stacking Ensemble Method for Battery Grade Multi-Classification". (To submit in Conference)

Journal Papers.....

Ali, S.; Bogarra, S.; Khan, M.M.; Taha, A.; **Phyo, P.P.**; Byun, Y.-C. Prospective Submodule Topologies for MMC-BESS and Its Control Analysis with HBSM. Electronics 2023, 12, 20. https://doi.org/10.3390/electronics12010020

P. P. Phyo and C. Jeenanunta, "Daily Load Forecasting Based on a Combination of Classification and Regression Tree and Deep Belief Network," in IEEE Access, vol. 9, pp. 152226-152242, 2021, doi: 10.1109/ACCESS.2021.3127211.

Phyo, P.-P.; Byun, Y.-C.; Park, N. "Short-Term Energy Forecasting Using Machine-Learning-Based Ensemble Voting Regression". Symmetry 2022, 14, 160. https://doi.org/10.3390/sym14010160

Phyo, P.-P.; Jeenanunta, C. "Advanced ML-Based Ensemble and Deep Learning Models for Short-Term Load Forecasting: Comparative Analysis Using Feature Engineering". Appl. Sci. 2022, 12, 4882. https://doi.org/10.3390/app12104882"

Phyo, P.P.; Byun, Y.-C. "Hybrid Ensemble Deep Learning-Based Approach for Time Series Energy Prediction". Symmetry 2021, 13, 1942. https://doi.org/10.3390/sym13101942

Phyo, P. P., & Jeenanunta, C. (2019). "Electricity load forecasting using a deep neural network". Engineering and Applied Science Research, 46(1), 10–17. Retrieved from https://ph01.tci-thaijo.org/index.php/easr/article/view/116025

"Electricity Load Forecasting in Thailand Using Deep Learning Models", **P.P. Phyo**, C. Jeenanunta and K. Hashimoto, International Journal of Electrical and Electronic Engineering and Telecommunications (IJEETC), Vol. 8, No. 4, July 2019.

Jeenanunta, C., Abeyrathna, K. D., Dilhani, M. H. M. R. S., Hnin, S. W., & **Phyo, P. P.** (2019). "Time Series Outlier Detection for Short-Term Electricity Load Demand Forecasting". INTERNATIONAL SCIENTIFIC JOURNAL OF ENGINEERING AND TECHNOLOGY (ISJET), 2(1), 37–50. Retrieved from https://ph02.tci-thaijo.org/index.php/isjet/article/view/175908

Phyo, P.P.; Byun, Y.-C, “Fruit Price Prediction Using ML-Based-Ensemble Methods: Bagging, Boosting, and Staking in Jeju Island”. (Under Review)

S. Ali, S. Bogarra, M. N. Riaz, **P. P. Phyo**, D. Flynn, A. Taha, “From Time-Series to Hybrid Models: Advancements in Short-Term Electrical Load Forecasting” . (Under Review)