Akara Supratak

Address
Faculty of ICT
Mahidol University
999 Puttamonthon Rd. Salaya
Nakhon Pathom 73170
Thailand

Tel: +66 2 441 0909
Fax: +66 2 849 6099
Email: akara.sup@mahidol.edu

Research Interests
Biosignal Analysis, Computer Vision, Deep Learning, Machine Learning

Professional Experience
Instructor at Mahidol University (2018-Present)
- Fundamentals of Programming
- Computer Organization and Architecture

Deep Learning Expert at tebs.io (2018-Present)
- Train a deep learning on a very large dataset

Teaching Assistant at Imperial College London (2013-2017)
- Advance Database
- Distributed Algorithms
- Software Engineering
- Computer Vision

Education
Doctor of Philosophy in Computing Research, 2018
Imperial College London, United Kingdom
Supervisor: Prof. Yike Guo

Master of Science in Computing (Software Engineering), 2013
Imperial College London, United Kingdom
Supervisor: Prof.Yike Guo

Bachelor of Science in Information and Communication Technology, 2010
Mahidol University, Thailand
GPA: 3.73

Selected Honors
International
- Winner of Anglo-Thai Society Educational Award for Excellence 2017 in Engineering and Technology, 2017.
  Research Title: Learning from Biosignals
- Best Open source Software in the Proceedings of the 2017 ACM on Multimedia Conference, 2017.
  Software: TensorLayer (2017)

- 2nd Place in Game Design (Windows/XBOX) of Microsoft Imagine Cup, New York, USA, 2011.
  Game Name: Junk Master: The Journey to Junk Lord (JM2)
- One of the six finalists in Game Design (Windows/XBOX) of Microsoft Imagine Cup, Warsaw, Poland, 2010.
  Game Name: Junk Master: The Journey to Junk Lord (JM1)

National

- Full Scholarship for Young ICT Instructor Development from the Faculty of ICT, Mahidol University, 2011.
- Academic Excellence from the Faculty of ICT, Mahidol University, 2011.
- Honorable Mention in ACM-ICPC Asia Phuket Regional Programming Contest 2009, Phuket, Thailand.
  Role: Lead Programmer
- Two Honorable Mentions in PC and console game category of SIPA Game Contest 2009.
  Game Name: Destination Earth: Primo Adventure

Selected Professional Service

Reviewer in 2019

- IEEE Transactions on Neural Systems & Rehabilitation Engineering (TNSRE)

Reviewer in 2018

- Multiple Sclerosis Journal (MSJ)
- IEEE Transactions on Neural Systems & Rehabilitation Engineering (TNSRE)
- IEEE Access
- Computer Science and Application Engineering (CSAE)

Selected Invited Talks and Keynote Addresses

- Deep Learning Workshop, Mahidol University, 2018
- Data Science Workshop, JCSSE, 2018
- Revolutions in Biomedicine Summer Programme, Imperial College London, 2016
- Short course in eHealth, Imperial College London, 2015

Selected Publications (Full publication list: https://akaraspt.github.io/)

A. Supratak, G. Datta, A. R. Gafson, R. Nicholas, Y. Guo, and P. M. Matthews, "Remote monitoring in the home validates clinical gait measures for multiple sclerosis", in *Frontiers in Neurology*, vol. 9, 2018.

A. Supratak, S. Schneider, H. Dong, L. Li, Y. Guo, "Towards Desynchronization Detection in Time-Series", in *NIPS Time Series Workshop, 2017*.

H. Dong, A. Supratak, L. Mai, F. Liu, A. Oehmichen, S. Yu, Y. Guo, "TensorLayer: A Versatile Library for Efficient Deep Learning Development", in *Proceedings of the 2017 ACM on Multimedia Conference*, (**Award: Best Open source software**).

A. Supratak, H. Dong, C. Wu, and Y. Guo, "DeepSleepNet: a Model for Automatic Sleep Stage Scoring based on Raw Single-Channel EEG," in *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 25, no. 11, pp. 1998-2008, 2017.

H. Dong, A. Supratak, W. Pan, C. Wu, P. M. Matthews, and Y. Guo, “Mixed Neural Network Approach for Temporal Sleep Stage Classification,” in *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, vol. 26, no. 2, pp. 324-333, 2018.

A. Supratak, C. Wu, H. Dong, K. Sun, and Y. Guo, “Survey on Feature Extraction and Applications of Biosignals,” in *Machine Learning for Health Informatics: State-of-the-Art and Future Challenges*, vol. 9605, 2016, pp. 161–182.

A. Supratak, G. Datta, C. Wu, S. Yu, C. D’Arcy, R. Nicholas, Y. Guo, and P. Matthews, “Remote Actigraphy for Quantitative Assessment of Walking Speed in People with MS,” *Neurology*, vol. 86, no. 16 Supplement, 2016.

A. Supratak, L. Li, and Y. Guo, “Feature extraction with stacked autoencoders for epileptic seizure detection,” in *36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC),* 2014, pp. 4184–4187. (Oral presentation)

Y. Li, L. Guo, A. Supratak, and Y. Guo, “Enabling performance as a service for a cloud storage system,” in *IEEE 7th International Conference on Cloud Computing (CLOUD)*, 2014, pp. 554–561.