Tuyen P. Le | Resume

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"In the End, we will remember not the words of our enemies, but the silence of our friends." ***Martin Luther King, Jr.***

Education

Kyung Hee University — **South Korea**
Master and PhD, 4.14/5.0 — *2014–2019*
Research Topics: Deep Reinforcement Learning, Machine Learning, Robotics

Bach Khoa University — **Ho Chi Minh City**
Bachelor, 8.46/10.0 — *2008–2013*
Honor program

Luong Van Chanh Gifted High School — **Phu Yen province**
Diploma, 9+/10 — *2005–2008*
Subjects taken: Mathematics, Physics, Chemistry, English . . .

PhD dissertation

Title: *Deep Hierarchical Reinforcement Learning Algorithm in Partially Observable Markov Decision Processes*

Supervisors: TaeChoong Chung

Abstract: In recent years, reinforcement learning has achieved many remarkable successes due to the growing adoption of deep learning techniques and the rapid growth in computing power. Nevertheless, it is well-known that flat reinforcement learning algorithms are often not able to learn well and data-efficient in tasks having hierarchical structures, e.g. consisting of multiple subtasks. Hierarchical reinforcement learning is a principled approach that is able to tackle these challenging tasks. On the other hand, many real-world tasks usually have only partial observability in which state measurements are often imperfect and partially observable. The problems of RL in such settings can be formulated as a partially observable Markov decision process (POMDP). In this paper, we study hierarchical RL in POMDP in which the tasks have only partial observability and possess hierarchical properties. We propose a hierarchical deep reinforcement learning approach for learning in hierarchical POMDP. The deep hierarchical RL algorithm is proposed to apply to both MDP and POMDP learning. We evaluate the proposed algorithm on various challenging hierarchical POMDP.

Key words: Hierarchical Deep Reinforcement Learning, Partially Observable MDP (POMDP), Semi-MDP, Partially Observable Semi-MDP (POSMDP)

Experience

Professional

Software Engineer at KMS Technology Vietnam — **Ho Chi Minh City**, *2013–2014*

Ranked: Top 26 best work places in Vietnam
Website: https://www.kms-technology.com/
Description: Develop some mobile applications (iOS and Android).

Miscellaneous

Internship at Recobell — **Seoul City**, *2015–2016*

Website: http://www.recobell.com/rb/
Description: Develop mobile applications (iOS and Android).

Internship at Polliwog Corp. — **Seongnam City**, *2014–2015*

Website: http://www.polliwogeda.com/xe_new/
Description: Develop algorithm (C++) to find a shortest path in a Printed Circuit Board (PCB).

Internship at VNG Corp. — **Ho Chi Minh City**, *2012–2013*

Website: https://vng.com.vn/
Description: Work in a group to develop a website using state-of-the-art technologies.

Languages

Korean: Intermediate level — *Read, Write, Speak (simple form)*
English: Influence — *Second language*
Vietnamese: Influence — *Mother language*

Computer skills

Programming Languages: C++, Java, Python, Objective-C, Swift, Matlab, Latex
Libraries: Cocoa, OpenCV, Tensorflow, Matplotlib, ROS, Gym AI
Tools: Visual Studio, Matlab, Pycharm, Eclipse, XCode, Texmaker
Miscellaneous: Adobe Photoshop, Adobe Lightroom. ...

References

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Publications

[1]JinSeok Kim Md. Abu Layek Tuyen P. Le Marlith Jaramillo TaeChoong Chung CholJin Jong, Seung-yoon Choi. Study of Sound Location Tracking Mobile Robot Using Lego Mindstorms. volume , pages 1028–1029. KOREA INFORMATION SCIENCE SOCIETY, 2016.

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[8]Tuyen P. Le, Vien Anh Ngo, P Marlith Jaramillo, and TaeChoong Chung. Importance sampling policy gradient algorithms in reproducing kernel hilbert space. *Artificial Intelligence Review*, pages 1–21.

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[10]Md Alamgir Hossain Ngo Thien Thu Tuyen P. Le Ashis Talukder-TaeChoong Chung Eui-Nam Huh Md Abu Layek, Ngo Quang Thai. Analysis of the Effects of Timing Presets on the Performance of H.264/AVC and H.265/HEVC Video Encoders. volume , pages 442–443. Korea Institute Of Communication Sciences, 2017.

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