PATARA TRIRAT
Ph.D Student

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RESEARCH INTERESTS

Data Mining and Analysis, Automated Machine Learning (AutoML),
Intelligent Learning Systems, Web Development

EDUCATION

AUGUST 2020 — PRESENT / DAEJEON, SOUTH KOREA
KAIST
Ph.D in School of Computing, GPA: 4.00 / 4.30
Advisor: Prof. Jae-Gil Lee

AUGUST 2018 — AUGUST 2020 / DAEJEON, SOUTH KOREA
KAIST
M.S. in Knowledge Service Engineering, GPA: 3.80 / 4.30
Thesis: Analysis of Dangerous Driving Behavior from Driving Log Data for Traffic Accident Risk Prediction
Advisor: Prof. Jae-Gil Lee
Additional Activity:
+ **Student Assistant Photographer**: International Scholar & Student Services (ISSS)
+ **Club Member**: Lunatic Street Dance Club

JUNE 2012 - MAY 2016 / BANGKOK, THAILAND
Kasetsart University
B.S. in Computer Science with First Class Honors, GPA: 3.74 / 4.00
Advisor: Prof. Pakaket Wattuya
Additional Activity:
+ **Web Developer** (Co-operative Education): NewKru Co., Ltd. (Supervisor: Prof. Sukumal Kitisin and Prof. Usa Sammapun)
+ **Teaching Assistant**: Web Technology and Web Services (CS443)
+ **Dance Instructor / Club Member**: KU Dance Club

EMPLOYMENT

AUGUST 2018 — PRESENT / DAEJEON, SOUTH KOREA
Research Assistant at Data Mining Lab, KAIST
Spatial-Temporal Data Mining and Analysis, Deep Learning Research, Automated Machine Learning for Data Stream

MAY 2017 — AUGUST 2018 / BANGKOK, THAILAND
Frontend Developer at Sobtid Edutainment Co., Ltd.
Building APIs and developing web applications under sobtid.me project (both services for customers and in-house officers) using Node.js on Amazon's AWS as well as the web application using React.js with Google's Firebase

NOVEMBER 2016 — FEBRUARY 2017 / BANGKOK, THAILAND
Intern at Korean Cultural Center
Advertisement Design, Document Translation, Event Organization Assistance, and Public Relations

JUNE 2015 — NOVEMBER 2015 / BANGKOK, THAILAND
Web Developer at NewKru Co., Ltd.
Researching on Massive Open Online Course (MOOC) platform and Developing a new MOOC application

In Progress

+ Trirat, P., Yoon, S., and Lee, J.,
RiskProphet: Foresee Traffic Accident Risk with Multi-Graph Attention Networks
A Journal Paper

+ Trirat, P., Yoon, S., and Lee, J.,
Neural Architecture Search for Anomaly Detection from a Complex Evolving Data Stream
A Conference Paper

Conference Proceedings

+ Trirat, P. and Lee, J.,
DF-TAR: A Deep Fusion Network for Citywide Traffic Accident Risk Prediction with Dangerous Driving Behavior
TheWebConf 2021 (Top Conference, Acceptance Rate: 20.6%)

+ Trirat, P., Noree, S., and Yi, M.Y.,
IntelliMOOC: Intelligent Online Learning Framework for MOOC Platforms
EDM 2020 (Poster Paper)

+ Shin, Y., Yoon, S., Trirat, P., and Lee, J.
CEP-Wizard: Automatic Deployment of Distributed Complex Event Processing
IEEE ICDE 2019 (Top Conference, Demonstration Paper)

+ Trirat, P., Kim, M., and Lee, J.
Experimental Analysis of the Effect of Autoencoder Architectures on Time Series Representation Learning
KIISE, KCC

Journal Articles

+ Trirat, P., Yoon, S., and Lee, J.,
Spatial and Temporal Analysis of Dangerous Driving Behavior Using DTG Data
Korea SIGDB 2019 (Vol. 35 No. 3)

+ Trirat, P., Yoon, S., and Lee, J.,
Study on Driving Behavior of Different Vehicle Types Using DTG Data
Korea SIGDB 2019 (Vol. 35 No. 2)

Languages
Thai: Native
English: Effective Operational Proficiency *(**TOEIC**: 975 / 990)*
Korean: Limited Working Proficiency *(**TOPIK**: Level 5 / 6)*

Programming Languages
Python, JavaScript, HTML/CSS, Java, R
Frameworks / Libraries
Tensorflow, Keras, PyTorch, React.js, Node.js
Cloud Services
Google Cloud Platform, Amazon Web Services, Microsoft Azure
Softwares
Microsoft Offices, Apple iWork, Adobe Photoshop, Apple Final Cut Pro

ACCOMPLISHMENTS

Awards
+ 2020 *KAIST Scholarship* (Doctoral Program)
+ 2019 3rd Place at *Year End Party Talent Show* by KAIST ISSS
+ 2018-20 *KAIST Scholarship* (Master Program)
+ 2017 Winner at *Thailand Hip Hop Dance Championship* Megacrew Division by Hip Hop International Thailand
+ 2016 Winner *LINE Finance Night Dance Competition* by LINE Finance
+ 2014-16 *Faculty of Science Awards* for Outstanding Academic Achievement Student by Faculty of Science, Kasetsart University
+ 2013-15 *Medal of Excellent Academic Achievement* by Kasetsart University
+ 2013-15 *5As Scholarship* by Department of Computer Science
+ 2012-14 *Tuition fee Exemption* (5As+ per semester) by Kasetsart University
+ 2012 *King Rama IX's Royal Awards* (Qualified Grantee of Big Vocational College) by Ministry of Education
+ 2011 3rd Runner Up at *MOS Olympics Competition Thailand* by ARiT
+ 2011 Winner H.R.H Princess Soamsawali Trophy at *SIAM MOS Competition* by ARiT

Certificates
+ 2019.07 Certificate of Completion (*Introduction to Data Science*) by Skooldio
+ 2019.04 Certificate of Completion (*2019 Spring Mentor Program*) by KAIST ISSS
+ 2018.03 *Mobile Sites Certification* by Google
+ 2018.03 Certificate of Completion (*Modern React with Redux*) by Udemy
+ 2017.08 Certificate of Completion (*React Js and Redux Mastering Web Apps*) by Udemy
+ 2017.05 Certificate of Training (*Mr.Wiggles Hip Hop Camp*) by Studio Zoom
+ 2016.08 Certificate of Achievement (*K-Singing Class*) by Korean Cultural Center
+ 2016.04 *Test of Practical Competency in ICT* (TOPCIT — Score: 297, Level: 2) by IITP and KPC
+ 2015.12 Certificate of Completion (*제1기 한국유학대비 한국어과정: 중급*) by Korean Education Center
+ 2014.05 Certificate of Participation (*Thailand K-POP Camp for Young Talents*) by Korean Cultural Center and Silpakorn University
+ 2014.01 Certificate of Completion (*5th Master Class*) by Move With Passion
+ 2013.10 Certificate of Honor (*Super Start Summer Camp*) by Monkey Town Academy
+ 2013.08 Certificate of Participation (*ACM-ICPC Thailand Central Group A Programming Contest 2013*) by ACM-ICPC
+ 2013.03 Certificate of Training (1*st Software Developing Skills Training Camp*) by Department of Computer Science
+ 2012.10 Certificate of Training (*1st Programming Skills for Problem-solving Training Camp*) by Depart of Computer Science

Major Course Projects at KAIST
+ Conversational AutoML: A Framework for Generating an Efficient Machine Learning Model with a Few Sentences (CS579: Computational Linguistics)
+ HandyBoard: An Adjustable Split of Soft Keyboard in Landscape Mode

Smartphone Touch Screens (CS584: Human-Computer Interaction)
+   Jet Presentation: A Presentation Rehearsal Partner for Everyone (KSE624: Mobile and Pervasive Computing for Knowledge Services)
+   TRepNet: Convolutional Denoising Autoencoder for Time Series Representation Learning (KSE801: Data Analysis based on Deep Learning)
+   Answering Question in Massive Open Online Course by Recommending Ranked Video Clips (KSE643: Knowledge Engineering and Intelligent Decision Making)

Previous Projects
+   Korean Square Web Application (React.js)
+   D Maniac Studio Mobile Application (React Native)
+   D Maniac Studio Web Application (React.js)
+   Sneakavilla Online Store (Wordpress)
+   Kyouei Co., Ltd. Website (Wordpress)
+   Sriracha Tugboat Co., Ltd. Website (Wordpress)
+   Web Application UX/UI Design (Human-Computer Interaction Assignment and Project using AngularJs)
+   Robotz Language and Compiler (Formal Language & Automata Theory Project using Java)
+   Hook Flash Card E-Learning Web Application (Web Technology and Web Service Project#2 using CakePHP)
+   Workpoint Web-based Resource Management (Web Technology and Web Service Project#1 using PHP)
+   Floral Bloom (ERP Project using SAP B1)
+   Flower Bloom Online Store (Ruby on Rails on IBM Bluemix)
+   Adventure in Wonderland (Software Engineering Game Project using Java)
+   Hangman Game (Network Application Project using Python with Tk GUI)
+   Index Sequential Search (Data Structure Project using Adobe Flash Animation)
+   Fan Store (Software Construction Project using Java)
+   Electricity Cost Prediction Program (DevCamp#1 Windows 8 Application Project using C#)
+   Hangman CLI Game (AlgoCamp#1 using Python)
+   Polynomial Calculation (Computer Programming Project using Python)
+   Store Project (Computer Programming Project using Python)

On-stage Performances
+   2019 Lunatic - Spring PPOP Battle (Top 4)
+   2019 Lunatic - Open Battle (Prelims)
+   2019 Lunatic - 기획부장배 Battle (Top 8)
+   2019 Lunatic - Spring 오픈동방 Battle (Guest Show)
+   2018 Lunatic - Fall Freshmen Battle (Top 8)
+   2018 Lunatic - Fall Illusion x Lunatic Battle (Top 8)
+   2018 Lunatic - Fall Performance
+   2017 D Maniac Megacrew - Hip Hop International Thailand (Winner)
+   2017 D Maniqueen - Hip Hop International Thailand (Ranked 12th)
+   2016 D Maniqueen - LINE Finance Night Dance Competition (Winner)
+   2016 D Maniqueen - Hip Hop International Thailand (Ranked 6th)
+   2016-18 KU Dance Club - Kaset Fair Annual Festival
+   2016 KU Dance Club - Kasetsart University Orientation Day
+   2015 D Maniqueen - Seacon Street Int'l Challenge (Ranked 6th)
+   2015 D Maniqueen - To Be Number One Variety Showcase (NBT

Channel)
+ 2015 TomYumKoong - Hip Hop International Thailand (Ranked 4th)
+ 2015-16 KU Dance Club - KU Firstdate
+ 2015-16 KU Dance Club - Freshy Night
+ 2014-16 KU Dance Club - Open Activity World Event
+ 2015-16 KU Dance Club - Royal Project Foundation Annual Event at Central World

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OTHER INTERESTS

Art and Sport
Performing Arts, Acting, Dancing, Singing, Table Tennis, Running, Basketball

Music
K-Ballad, K-Pop, Rap/Hip-Hop, R&B, Soundtracks

Lifestyles
Photography, Dramas/Movies, Mainstream Social Medias