Titipat Achakulvisut

Personal Information

PhD Candidate
Department of Bioengineering
University of Pennsylvania
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https://github.com/titipata
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titipata
Google Scholar

Interests

Science of Science, Applied Machine Learning, Text Mining, Natural Language Processing, Content-based and Personalized Recommendation System, Medical Electronic Health Records

Education

University of Pennsylvania, Philadelphia, PA, USA — 2017 – Present
Ph.D., Bioengineering — (GPA 3.97/4.0)

Northwestern University, Evanston, IL, USA — 2013 – 2017
M.S./Ph.D., Biomedical Engineering — (GPA 3.95/4.0)

Chulalongkorn University, Bangkok, Thailand — 2008 – 2012
B.Eng, Electrical Engineering, *First Class Honors* — (GPA 3.87/4.0)

Awards & Fellowships

DARPA Systematizing Confidence in Open Research and Evidence funding — 2020 – present
Thailand Youth Start-Up Grant — 2021
2^{nd} place at Bangkok Datathon, *Analyzing Bangkok Budget* — 2020
Royal Thai Government Scholarship, Ministry of Science and Technology — 2012 – 2020
2^{nd} place student case competition, Wharton People Analytics Conference — 2018
Microsoft Azure Research Award $20,000 — 2015 – 2016
2^{nd} place in Data Visualization Competition, Northwestern Computational Research day — 2015
Outstanding Academic Performance in Engineering — 2008 – 2012
Nominated candidate for the Ananda Mahidol Scholarship — 2012
SCG Innovative Suggestion Award — 2011
1^{st} place in Mathematics Entrance Exam, ONET, Thailand — 2008

Research Experience

Allen Institute for Artificial Intelligence Intership — Spring 2017
Mentor: Chandra Bhagavatula
Research: Scientific Claim Indentification and Evidence Alignment

Research Intern — 2012 – 2013
AIM Laboratory, Department of Biomedical Engineering
Mahidol University, Salaya, Thailand

Undergraduate Research — 2011 – 2012
DSPRL Laboratory, Department of Electrical Engineering
Chulalongkorn University, Bangkok, Thailand
Advisor: Nisachon Tangsangiumvisai
Research: Adaptive Filter and Noise Reduction Algorithm

Talk

Department of Biomedical Engineering, Mahidol University, Salaya	March 2021
AI generate Thai lyrics, Bangkok Music City	October 2020
Natural Language and its application, Srinakharinwirot University, Bangkok	October 2020
Data Science in e-commerce, Knowledge Exchange, Bangkok	August 2020
Growth Lab, Harvard, University, Boston	April 2019
Python Data Science Meetup, Hangar, Bangkok	August 2017
Python Meetup Seattle (Puppy), Zillow, Seattle	June 2017
Brain and Behaviour lab, Imperial College London	September 2016
Data visualization judging panel, Northwestern Computational Research day	April 2016
HAMLET group, University of Wisconsin at Madison, Madison	March 2016
ChiPy (Chicago Python community), Bank of America, Chicago	February 2016
Knowledge Lab, University of Chicago, Chicago	November 2015
SONIC lab, Northwestern University, Chicago	April 2015

Journal Articles

T Achakulvisut, T Ruangrong, P Mineault, TP Vogels, MAK Peters, P Poirazi, C Rozell, B Wyble, D Goodman, KP Kording (2020) *Towards Democratizing and Automating Online Conferences: Lessons from the Neuromatch Conferences.* Trends in Cognitive Sciences

T van Viegen et al. (2020), *Neuromatch Academy: Teaching Computational Neuroscience with global accessibility.* arXiv preprint

Achakulvisut T, Ruangrong T, Acuna DE, Wyble B, Goodman D, Kording K (2020) *neuromatch: Algorithms to match scientists.* eLife Labs

T Achakulvisut, T Ruangrong, I Bilgin, S Van Den Bossche, B Wyble, D Goodman, K Kording (2020), *Improving on legacy conferences by moving online.* eLife, 2020

T Achakulvisut, DE Acuna, K Kording (2020) *Pubmed parser: a Python parser for PubMed Open-Access XML subset and MEDLINE XML dataset XML dataset.* Journal of Open Source Software

M Jas et al. (2020) *Pyglmnet: Python implementation of elastic-net regularized generalized linear models.* Journal of Open Source Software

Achakulvisut T, Bhagavatula C, Acuna D, Kording K (2019) *Claim extraction in biomedical publications using deep discourse model and transfer learning.* arXiv preprint arXiv:1907.00962 (see on)

Kittinaradorn R, Achakulvisut T, Chaovavanich K, Srithaworn K, P Chormai, C Kaewkasi, T Ruangrong, K Oparad K (2019) *DeepCut: A Thai word tokenization library using Deep Neural Network.* Github (see on)

Lienard JF, Achakulvisut T, Acuna DE, David SV (2018) *Intellectual Synthesis in Mentorship Determines Success in Academic Careers.* Nature communications

Achakulvisut T, Acuna DE, Ruangrong T, Kording K (2016) *Science Concierge: A Fast Content-Based Recommendation System for Scientific Publications.* PLOS ONE 11(7): e0158423. doi:10.1371/journal.pone.0158423 (see on)

Conferences

T. Achakulvisut, D. E. Acuna, K. P. Kording, July 2017
Clustering conference abstracts using a combination of author preferences and topic relevance,
Knowledge of Network Science Conference

D. E. Acuna, T. Achakulvisut, K. P. Kording October 2015
How to visit 0.5% of 15,000 possible posters? Automated poster visit scheduler for SfN
Society for Neuroscience conference (see www.scholarfy.net)

D. E. Acuna, T. Achakulvisut, K. P. Kording June 2015
Website for Automatic Reviewer Assignment and Manuscript Scoring
Science of Team Science conference (see pr.scienceofscience.org)

Projects

Scholarfy - content-based recommendation for MEDLINE dataset
Recommendation system web application to search 28 million publications from MEDLINE dataset

Machine Learning facilitates Neuroscience Conferences
One-on-one matching algorithm for CCN conference, Paper-reviewer matching for COSYNE conference, Content-based recommnedation engine for SfN conference

Membership

Neuromatch Conference Organizer	2020 – present
NIH Special Volunteer	2016 – present
Member of the McCormick Graduate Leadership Council, Northwestern U	2014 – 2015
IEEE Student Membership	2011 – 2015
Member of the Engineering Students Academic Club	2008 – 2011
Member of the Engineering Light and Sound Club	2008 – 2011

Selected Extracurricular Activities

AI Builders: Teaching AI to high school students in Thailand	2021
Summer School in Computational Sensory-Motor Neuroscience (CoSMo)	2014
Brain Fair, Northwestern University Brain Awareness Outreach	2014
NECTEC Electronics Camp: Teaching electronics to high school students	2010
Teaching basic science in remote areas of Thailand	2008 – 2010
Head of Freshmen Tutorial Project: Teaching basic science for freshmen	2009
Physics Olympiad Camp	2006 – 2007

Computer Skills

Programming and Scripting Languages:
Advanced: Python, Apache Spark, MATLAB, Mathematica
Intermediate: Julia, HTML, CSS, JavaScript, Java, R, C, AngularJS, Scala
Others: LaTeX, Emacs, Git, Adobe Illustrator, Microsoft Office
Cloud Computing: Amazon EC2, Google Cloud Computing, Microsoft Azure
Operating Systems: Mac OS X, Linux, Windows

Languages

Thai (Native), English (Proficient)