Curriculum Vitae

Name : Rachasak (First) Somyanonthanakul (Last)

Gender : Male

Position :
- Lecturer, Data Science and Innovation
  College of Interdisciplinary Studies, Thammasat University
- Secretary of Artificial Intelligence Association of Thailand

Contact Address : Room 123, SC3, 99 m. 18 Phahonyothin Road, Khlong Nueng, Khlong Luang District, Pathum Thani, 12120 Tel. 02-564-4440 (ext. 6811, 6813)

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Research Fields : Artificial Intelligence, Machine Learning, Data Science, Data Mining, Data Engineering, Big Data Analytics, Association Rule Mining, Time-Series Analysis, Deep Learning, Generative AI, Natural language processing, Bioinformatics, Genomics, Medical and Healthcare Informatics, Laboratory Information System, Project Management, Logistic and Supply Chain Management, Digital Marketing, Capital Market, Robo- Advisor, Algorithm High Frequency Trading

Educational Background :
- Ph.D. in Engineering and Technology (2016 - 2022),
  Sirindhorn International Institute Technology, Thammasat University
- M.Sc. in Technology Management (2002 - 2004),
  College of Innovation, Thammasat University
- B.Sc. in Computer Science (1995 - 1999),
  Faculty of Science and Technology, Thammasat University

Employment :
- Lecturer, Data Science and Innovation, College of Interdisciplinary Studies, Thammasat University (2025 - Present)
- Assistant Director, Research and Data Department, The Securities and Exchange Commission, Thailand (2024 - 2025)
- Postdoctoral Researcher Fellow, Faculty of Pharmaceutical Sciences, Burapha University (2023 – 2025)
- Lecturer, School of Information Technology,
  King Mongkut's Institute of Technology Ladkrabang (2024)
- Program Director, Master of Science in Cyber Security Management and Technology, Rangsit University (2024)
- Assistant Professor, Rangsit University (2023 – 2024)

- Head of Medical Informatics Department, Rangsit University (2016-2017)
- Head of Service Science Department, Rangsit University (2014-2017)
- Lecturer, Rangsit University (2010 – 2023)
- Information Technology Auditor, Government Saving Bank (2007-2010)
- Lecturer, Valaya Alongkorn Rajabhat University (2006 – 2007)
- Programmer, Provincial Electricity Authority (2000 – 2006)

Research Experiences :

- Committee, Super AI Engineer Season 1 - 5
- Medical AI Standard (TCELS)
- Co-Initiating health research, a development of novel bacteriophage therapies for treating drug resistant bacterial infections phage (eAsia JRP, Thailand)
- Developing evaluation, visualization, and productivity tools for streamlining machine learning research (Siam Cement Group, Electricity Generating Authority of Thailand, and Siriraj Hospital)
- Adapting new algorithms and architectures to exploit modern cloud computing environments (Siriraj hospital)
- Design and Implementation Laboratory Information System in Clinical Laboratory (Rangsit University)
- Migration and Implementation Core Banking System and Enterprise Resource Planning (Government Saving Bank and Provincial Electricity Authority)
- Auditing Information Technology System based on COBIT, COSO, ITIL and ISO (Government Saving Bank)

Teaching Experiences :

- Artificial Intelligence and Machine Learning
- Data Science, Data Mining, Data Engineering, Database System
- Medical and Health Informatics
- Laboratory Information System
- System Analysis and Design
- Programming (Python, R, C, C++, SQL)
- Project Management
- Operation Research and Optimization

Publication:

International Journal

- Kasem Seresirikachorn, Rachasak Somyanonthanakul, Matthew C Johnson, Panisa Singhanetr, Jiraporn Gatedee, David S Friedman, Nazlee Zebardast (2025) **The Impact of Vision Impairment on Self-reported Falls among Older US Adults: A Cross-Sectional and Longitudinal Study**, *JMIR Aging 2025;8:e68771.* (SJR Q1)
- Kritsasith Warin, Sirasit Lochanachit, Praphan Pavarangkoon, Engkarat Techapanurak, Rachasak Somyanonthanakul, (2025) **Prediction of Medication-Related osteonecrosis of the jaw in patients receiving antiresorptive therapy using machine learning models.** *Journal of Oral and Maxillofacial Surgery, 83(3), 353-365*. (SJR Q1)
- Rachasak Somyanonthanakul, Kritsasith Warin, Sitthi Chaowchuen, Suthin Jinaporntham, Wararit Panichkitkosolkul, and Siriwan Suebnukarn. (2024). **Survival Estimation of Oral Cancer using Fuzzy Deep Learning**. *BMC Oral Health*. 24(1), 519. Switzerland AG: Springer Nature.1-11 (SJR Q1)
- Wararit Panichkitkosolkul, Rachasak Somyanonthanakul, Kritsasith Warin, and Siriwan Suebnukarn. (2024) **The Discovery of Oral Cancer Prognostic Factor ranking using Association Rule Mining**, *European Journal of Dentistry,* May 2024. (SJR Q1)
- Rachasak Somyanonthanakul, Kritsasith Warin, Watchara Amasiri, Karicha Mairiang, Chatchai Mingmalairak, Wararit Panichkitkosolkul, Krittin Silanun, Thanaruk Theeramunkong, Surapon Nitikraipot and Siriwan Suebnukarn. (2022). **Forecasting COVID-19 cases using time series modeling and association rule mining**. *BMC Medical Research Methodology*. 22:281 November 2022. Switzerland AG: Springer Nature. 1-18. (SJR Q1)
- Rachasak Somyanonthanakul and Thanaruk Theeramunkong. **Scenario-based Analysis for discovering Relations among Interestingness**, *Information Sciences*. 590 (2022), pp. 346-385 (SJR Q1)
- Amasiri, Watchara, Kritsasith Warin, Karicha Mairiang, Chatchai Mingmalairak, Wararit Panichkikosolkuli, Krittin Silanun, Rachasak Somyanonthanakul, Thanaruk Theeramunkong, Surapon Nitikraipot, and Siriwan Suebnukarn. 2021. **Analysis of Characteristics and Clinical Outcomes for Crisis Management during the Four Waves of the COVID-19 Pandemic**, *International Journal of Environmental Research and Public Health* 18, no. 23: 12633. https://doi.org/10.3390/ijerph182312633 (SJR Q1)

- Rachasak Somyanonthanakul and Thanaruk Theeramunkong. **Characterization of Interestingness Measures using Correlation Analysis and Association Rule Mining**, *IEICE Transactions on Information and Systems*, Vol. E103-D, No. 04, pp. 779-788, Apr. 2020. (SJR Q3)

National Journal

- สุภาพร พันธ์ยา, คริชณะ ฉิมมณี, ราชศักดิ์ สมยานนทนากุล. (2023). **การตระหนักรู้เท่าทันภัยคุกคามจากการใช้อินเทอร์เน็ต : กรณีจำลองการโจมตีด้วยการคาดเดารหัสผ่าน (Password Attack)**. วารสารวิชาการนวัตกรรมสื่อสารสังคม, 11(1), 165–171.

International Conference

- Thonghai-on, P., & Somyanonthanakul, R. (2025, November). A Systematic Review of Digital Literacy Skills for Personal in the Royal Thai Armed Forces Headquarters. In 2025 9th International Conference on Information Technology (InCIT) (pp. 853-859). IEEE.
- Tungdajahirun, N., Makasiranondh, W., Pidchayathanakorn, P., Chaisiriprasert, P., Kasemsawasdi, S., Angsirikul, S., & Somyanonthanakul, R. (2023, November). **Utilizing Artificial Intelligence in Cryptocurrency Trading: a Literature Review.** In 2023 7th International Conference on Information Technology (InCIT) (pp. 147-152). IEEE.
- Gatedee, J., Jaiping, K., Yothinarak, A., Netsawang, J., Kasemsawasdi, S., Angsirikuland, S., Somyanonthanakul, R. (2022). **Association Serum Uric Acid and Lipid Parameters in Patients at Lamphun Hospital, Thailand.** The *17th International Joint Symposium on Artificial Intelligence and Natural Language Processing (iSAI-NLP 2022),* 5-7 November 2022. Chiang Mai, Thailand. 152-157. IEEE
- Somyanonthanakul, R. and Gatedee, J. (May 2021) **Heuristic-based Multiple-criteria Analysis for Medical Technology Recruitment Problem with Weighted Average Competency Gap.** *In Proceedings, The RMUTT Global Business and Economic Conference (RTBEC 2021)*, May 28 2021, Thailand.
- Somyanonthanakul R. and Theeramunkong T. (2019) **Dynamic Relation-Based Analysis of Objective Interestingness Measures in Association Rules Mining. In**: Theeramunkong T. et al. *(eds) Advances in Intelligent Informatics, Smart Technology and Natural Language Processing. iSAI-NLP 2019. Advances in Intelligent Systems and Computing, vol 807. Springer, Cham*

- Somyanonthanakul, R., Roonsamrarn, M., & Theeramunkong, T. (November 2018). **Semantic-based Relationship between Objective Interestingness Measures in Association Rules Mining.** *In 2018 International Joint Symposium on Artificial Intelligence and Natural Language Processing (iSAI-NLP) (pp. 1-8). IEEE.*
- Somyanonthanakul, R. and Gatedee, T. (April 2017) **Design and Implementation of Laboratory Information System: A Case Study at the Medical Technology Clinic, Rangsit University.** *In Proceedings, RSU International Research Conference 2017 (RSUCON 2017)*, April 28 2017, Thailand
- Somyanonthanakul R. and Theeramunkong T. (2016) **An Investigation of Objective Interestingness Measures for Association Rule Mining**. *In: Booth R., Zhang ML. (eds.) PRICAI 2016: Trends in Artificial Intelligence. PRICAI 2016. Lecture Notes in Computer Science, vol. 9810. Springer, Cham*
- Somyanonthanakul, R. and Ludkrood, T**. iMoS: Intelligence Monitoring System of HIV Carriers in Thailand.** *In Proceedings of Knowledge Management International Conference (KMICe 2016).* Chiang Mai, Thailand, August 29–30, 2016.
- Somyanonthanakul, R. (2015) **TTT's: Test and Treat Tracking System on ResearchKit of HIV Carriers in Thailand.** *In Proceedings, the Tenth International Conference on Knowledge, Information and Creativity Support Systems (KICSS 2015),* 12-14 November 2015, Phuket, Thailand.
- Somyanonthanakul, R. (2015, June). **TATF: test and treat follow-up system of HIV carriers in Thailand.** *In 2015 12th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON)* (pp. 1-4). IEEE.

Awards:

- Silver Medal Award “Image processing system for analyzing walking patterns of bees in a beehive.” from the 47th International Exhibition of Inventions Geneva 2019, Switzerland
- Bronze Medal Award “Motor defects and status are intelligently observed from electric signal fluctuation using deep learning techniques.” from the 47th International Exhibition of Inventions Geneva 2019, Switzerland
- Special Award Gold Medal “A textile Pattern Recommendation System using Deep learning clustering technique and Kansei Engineering.” by International Federation of Invention Association from the 47th International Exhibition of Inventions Geneva 2019, Switzerland

Scholarship:

- Postdoctoral Researcher Fellow (2023 – 2024) (Burapha University)
- Research Assistance (2017 – 2018) (Sirindhorn International Institute of Technology, Thammasat University)
- STEM Workforce 2016-2017 (National Science and Technology Development Agency: NSTDA)

Research Project:

- Project Manager, Medical AI Standard (Thailand Center of Excellence for Life Sciences (Public Organization) and Artificial Intelligence Association of Thailand)
- Post-Doctoral Researcher, Frontier Workforce Development of Advanced Clinical Bioinformatics Postgraduate Program for Genomics Medical Industrial in Thailand (Faculty of Pharmaceutical Sciences - Burapha University)
- Co-Project Manager, Super AI Engineer Thailand: Artificial Intelligence System for Medical Screening Using Medical Big Data (Siriraj Hospital and CTAsia)
- Project-Member, Development of Algorithm for Big-Data Analytic to Evaluate Project Proposal and Develop Researcher, Innovator Database (Electricity Generating Authority of Thailand: EGAT)
- Machine Learning Scientist, Development of Machine Learning Model for Inspecting Concrete Quality (Siam Cement Group: SCG)
- Lecture, Research on Writing Skill Development for Students with Learning Disabilities (LD) using Integrated Learning and Teaching Assistive Software (National Science and Technology Development Agency: NSTDA)
- Head of Team GateDee Phage Therapy, Northern Digital Health Revolution to Chiang Mai Medical and Health Hub (Science and Technology Park. Chiang Mai University: CMU SteP)
- Head of Team GateDee Phage Therapy, SPRINT Accelerator Thailand Batch 3 (Sasin School of Management, Chulalongkorn University)