

TAN Jing Jie

(Jay, 25, y/o, 🇲🇾 Malaysian, 🎓 Google Scholar)

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Passionate about **machine learning** and **computer science**. Currently pursuing a **Ph.D. in Engineering** at **UTAR**, after graduating with **Distinction** in **BCS (Hons) Artificial Intelligence**. Awarded **grants and prizes** totaling up to **MYR 650,000 (USD 150,000)** for leading **research** and innovative **projects**. Experienced in developing **machine learning applications** across **finance, education, blockchain, and sustainability**, while consistently achieving **10+ top championships** and **5 research mobility grants**.

INDUSTRIAL EXPERIENCES

Machine Learning Engineer • Tanya Jiwa Ltd., Contract, Malaysia

Apr 2025 - Oct 2025

- Delivered an **LLM-powered mental health automation system** that reduced human resource requirements by **72%** for the education sector while maintaining **high-quality psychological services**.
- Engineered a **dynamic context-windowing algorithm** that decreased token consumption by **30%**, improved memory efficiency, and enhanced the model's intelligent contextual understanding.
- Advised on **technology stack choice** with **CTO**, and **streamlined testing**, achieving a **30% reduction** in development time and a **40% acceleration** in **cloud-hosted deployment readiness**.

Network Engineer • Huawei Technologies Ltd., Intern, Malaysia

Oct 2020 - Jan 2021

- Developed **automation scripts** for Network Technical Deployment, facilitating deployment across **100 servers** and accelerating the process by approximately **20x**.
- Executed **Project Management with Data Analytics** for networking hardware deployment across **3 projects** with Malaysian Telecom Companies.
- Coordinated with **2 local departments, headquarters, and stakeholders** to ensure alignment and effective communication.

Programming Lecturer • Angsam Media Ltd., Contract, Malaysia

Sep 2022 - Feb 2023

- Delivered comprehensive **AI, IT and programming lectures** with hands-on practical sessions to over **500 students**, including working professionals.
- Achieved **250% growth** in both enrollment and revenue through effective curriculum delivery and student engagement.

Software & Website Developer • Self-employed, Freelancer

Ongoing

- Designed and developed more than **10 web and mobile applications** for small-sized enterprises according to provided business requirements.

ACADEMIC EXPERIENCES

Visiting Scholar (Fully Funded) - Prof. LIU Kaiyang

Sep 2025 - Jan 2026

Memorial University of Newfoundland (MUN), Department of Computer Science, Canada

Visiting Scholar (Fully Funded) - Prof. Rupert SCHREINER

May 2025 - Jun 2025

Ostbayerische Technische Hochschule (OTH), Laboratory for Electro-Optics Systems (LEOS), Germany

Visiting Scholar (Fully Funded) - Prof. KAWARAZAKI Noriyuki

Feb 2025 - Mar 2025

Kanagawa Institute of Technology (KIT), Advanced Artificial Intelligence Research Center, Japan

Visiting Scholar (Fully Funded) - Prof. LO Shih-Yu

Sep 2024 - Oct 2024

National Yang Ming Chiao Tung University (NYCU), ICS Multimedia System Laboratory, Taiwan

Visiting Scholar (Fully Funded) - Prof. Anissa MOKRAOUI

Apr 2024 - Jun 2024

Université Sorbonne Paris Nord (USPN), Laboratoire de Traitement et Transport de l'Information, France

Scholar Representative (Fully Funded)

Feb 2025

ASEAN-IPR Regional Conference on Cybersecurity, Delegates, Thailand

Scholar Representative (Fully Funded)

Jan 2024

Global Young Scientist Summit (GYSS), Delegates, Singapore

EDUCATION

Doctor of Philosophy (Engineering), Universiti Tunku Abdul Rahman (UTAR), LKCFES

Nov 2022 - Nov 2025

Achievements: Best Presenter & Best Project Demo @ UTAR Postgraduate Colloquium 2024, Best Student Excellence Awards @ Joint International Workshop 2025 on AI Engineering and Technology (AIET 2025)

Scholarships: UTAR Education Foundation Scholarship (Fast Track Ph.D.), UTAR Research Fund – Research Scholarship Scheme, Greatech Integration – Student Assistantship

Bachelor of Computer Science (Honours), Universiti Tunku Abdul Rahman (UTAR), FICT

Jun 2019 - Jun 2022

CGPA: 3.9717 (First Ranked), Book Prize, 7 President's List, 1 Dean's List

Achievements: Innovation and Creativity Award, SDG Merit Award

Scholarship: Hong Leong Foundation Scholarship, UTAR Top Achiever Scholarship

Foundation in Science (Physical Science), Universiti Tunku Abdul Rahman (UTAR), CFS

May 2018 - May 2019

CGPA: 3.8272, President's List, Dean's List

Scholarships: UTAR Top Achiever Scholarship

High School (Science Stream), Bagan Jaya High School (SMK)

Jan 2013 - Dec 2017

Grade: Malaysian Certificate of Education (SPM) 8As

Achievements: Outstanding Student Awards (2017), Best Student Leader (2015-2017)

FUNDING GRANTS

Successfully secured **multiple international research mobility grants**, fostering global collaborations, multidisciplinary networking, access to advanced computational resources, and contributions to **Machine Learning** and **Computer Science**.

1. **Canada-ASEAN Scholarships and Educational Exchanges for Development (SEED)** Sep 2025 - Dec 2025
Research Mobility Grant, Recipient ⇒[1]
2. **Deutscher Akademischer Austauschdienst (DAAD) Research Grant** May 2025 - Jun 2025
Research Mobility Grant, Recipient ⇒[1]
3. **Japan Student Services Organization (JASSO) Research Scholarship** Feb 2025 - Mar 2025
Research Mobility Grant, Recipient ⇒[1]
4. **National Yang Ming Chiao Tung University (NYCU) Short Term Research Mobility Grant** Sep 2024 - Oct 2024
Research Mobility Grant, Recipient ⇒[1]
5. **Embassy of France in Malaysia Doctoral Research Mobility Grant** Apr 2024 - Jun 2024
Research Mobility Grant, Recipient ⇒[1]
6. **ITS Community Technological (CommTECH) Research Exchange Scholarship** Oct 2023 - Sep 2024
Research Scholarship, Recipient ⇒[1]
7. **Payment Network Digital Campus (PDC) 2024** Jan 2024 - Dec 2024
Project Grant, MYR 100,000 (~USD 23,000), Principal Investigator ⇒[1]
8. **Payment Network Digital Campus (PDC) 2023** Jan 2023 - Dec 2023
Project Grant, MYR 60,000 (~USD 14,000), Co-Principal Investigator ⇒[1]
9. **ASEAN Korea Cooperation Fund for ASEAN-IPR Regional Conference on Cybersecurity (CyberCon)** Feb 2025
Travel & Conference Grant, Awardee ⇒[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]
10. **UTAR Research Fund for Singapore Global Young Scientist Summit (GYSS)** Jan 2024
Travel & Summit Grant, Recipient ⇒[1]

PUBLICATIONS

Publications with **international collaboration**, including **Q1 journals** in **IEEE Transactions**, **conference proceedings**, and **peer-reviewed publications** spanning across **computational social systems**, **natural language processing**, **machine learning**, and **cybersecurity** domains.

1. **Tan, J. J.**, Kwan, B.-H., Ng, D. W.-K., Hum, Y.-C., Mokraoui, A., & Lo, S.-Y. (2025). Prompting-in-a-Series: Psychology-Informed Contents and Embeddings for Personality Recognition with Decoder-Only Models. *IEEE Transactions on Computational Social Systems*, 1–15. <https://doi.org/10.1109/tcss.2025.3593323>, JIF:4.9
2. **Tan, J. J.**, Kwan, B.-H., Ng, D. W.-K., & Hum, Y.-C. (2025). Adaptive focal loss with personality stratification for stably mitigating hard class imbalance in multi-dimensional personality recognition. *Scientific Reports*, 15(1). Springer Science and Business Media LLC. doi:10.1038/s41598-025-22853-y. Available at: <http://dx.doi.org/10.1038/s41598-025-22853-y>, JIF:3.9
3. **Tan, J. J.**, Kwan, B.-H., Ng, D. W.-K., & Hum, Y. C. (2025). Psychology-informed Natural Language Understanding: Integrating Personality and Emotion-aware Features for Comprehensive Sentiment Analysis and Depression Detection. *Pertanika Journal of Science and Technology*, 33(S4). <https://doi.org/10.47836/pjst.33.s4.04JIF:1.2>
4. **Tan, J. J.** (2025) Bytes of Peace: Leveraging Technology to Promote Trust and Security. *ASEAN-IPR Regional Conference on Cybersecurity: The Role of Information and Technology in Fostering a Culture of Peace in ASEAN*. ASEAN IPR Publication, pp. 60–67. <https://asean-airp.org/resources/publications/asean-ipr-cybersecurity-youth-essay-competition>
5. **Tan, J. J.**, Schreiner, R., Hausladen, M., Asgharzade, A., Edler, S., Bartsch, J., Bachmann, M., Schels, A., Kwan, B.-H., Ng, D. W.-K., & Hum, Y.-C. (2025). SiMiC: Context-Aware Silicon Microstructure Characterization Using Attention-Based Convolutional Neural Networks for Field-Emission Tip Analysis. *Journal of Vacuum Science & Technology B*, 43(6), 0005068. <https://doi.org/10.1116/6.0005068> (Editor's Choice, JIF: 2.7)
6. **Tan, J. J.**, Mokraoui, A., Kwan, B.-H., Ng, D. W.-K., & Hum, Y.-C. (2024). Siamese-Driven Optimization for Low-Resolution Image Latent Embedding in Image Captioning. In *2024 Signal Processing: Algorithms, Architectures, Arrangements, and Applications (SPA)* (Vol. 10, pp. 79–84). 2024 Signal Processing: Algorithms, Architectures, Arrangements, and Applications (SPA). IEEE. <https://doi.org/10.23919/spa61993.2024.10715604>
7. Wong, Y. J., **Tan, J. J.**, Tham, M.-L., Kwan, B.-H., & Hum, Y. C. (2025, July). Tri-Axial Scaling in Aerial Object Detection: Model Size, Dataset Size and Quality, and Test-Time Inference in the Cadot Challenge. Institute of Electrical and Electronics Engineers (IEEE). <https://dx.doi.org/10.36227/techrxiv.175322322.26858739>
8. **Tan, J. J.**, Kwan, B.-H., Ng, D. W.-K., & Hum, Y. C. (2023). Enhancing Performance in Sentiment Classification of Textual Messages through Personality Recognition Integration. *Proceedings of the 11th International Symposium on Applied Engineering and Sciences (SAES2023)*, pp. 258–259, eISBN: 9786297590646, <https://saes.upm.edu.my/>.
9. **Tan, J. J.**, Kwan, B.-H., Ng, D. W.-K., Hum, Y.-C., Mokraoui, A., & Lo, S.-Y. (2025). Large Language Model in Multilingual Personality Recognition (Reviewing)
10. **Tan, J. J.**, Kwan, B.-H., Ng, D. W.-K., Hum, Y.-C., Mokraoui, A., & Lo, S.-Y. (2025). LLM-as-a-judge for Theory-Agnostic Personality Recognition (Reviewing)
11. **Tan, J. J.**, Wang, H., Luo, J., Kwan, B.-H., Ng, D. W.-K., Hum, Y.-C., Mokraoui, A., & Liu, K. (2025). Policy-Agnostic Knowledge Aggregation Reinforcement in Federated Personality Modeling under Heterogeneous Privacy Constraints. (Preparing)

ACHIEVEMENTS

Back-to-back recipients of **Outstanding Talent Award 2024 and 2025** by the university in recognition of leading projects and competitions. The total accumulated grants and cash prizes amount to **MYR 650,000 (~USD 150,000)**, excluding separately granted travel funds and conferences/summits/events expenses. ⇒[1] [2] [3] [4]

1. **PayHack Hackathon** (100+ teams), *Payment Network Malaysia* May 2023
Champion, MYR 20,000 (~USD 4,600) ⇒[1] [2] [3] [4]
2. **CHIPTA Hackathon** (50+ teams), *Malaysian Government* Sep 2023
Champion, MYR 10,000 (~USD 2,300) ⇒[1]
3. **BRIDG3 Hackathon** (100+ teams), *Maschain* July 2024
Champion (Overall Track), USD 2,500; 1st Runner Up (Impact Track), USD 1,000 ⇒[1]
4. **CADOT Challenge** (10+ teams), *Institute of Electrical and Electronics Engineers (IEEE)* July 2025
Champion, EUR 1,000 (~USD 1,200) ⇒[1] [2] [3]
5. **CISCO AI Hackathon** (100+ teams), *Cisco* Dec 2024
Champion MYR 1,000 ⇒[1] [2] [3] [4]
6. **Huawei ICT Competition** (100+ teams), *Huawei Technologies* Mar 2022
1st Prize (Individual), ~USD 200; 1st Runner Up (Team), ~USD 200; 3rd Runner Up (Regional)
7. **Alibaba My Digital Talent in U Competition** (1000+ persons), *Alibaba Cloud* Jan 2023
1st Prize (Team), MYR 180,000 (~USD 42,000); 1st Runner Up (Individual), MYR 2,000 (~USD 500) ⇒[1]
8. **I-RIA Innovation Competition** (149+ teams), *Universiti Utara Malaysia* Dec 2023
Gold Award & Best Presentation, Sponsored Patent ⇒[1]
9. **ASEAN-China-India Youth Leadership Summit** (100+ teams), *OSG Youth Alliance & Resolute* Nov 2023
1st Prize (Malaysia), Sponsored for presentation at global summit (Singapore) ⇒[1]
10. **Community Technological Project Competition** (30+ teams), *Institut Teknologi Sepuluh Nopember* Aug 2023
Champion, Fully Sponsored Trip ⇒ [1]
11. **ASEAN-IPR Cybersecurity Conference - Youth Essay Competition** (National competition), *ASEAN-IPR* Jan 2025
1st Prize (Malaysia), Sponsored publication & trip & conference (Thailand) ⇒[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]
12. **Malaysia National Mathematical Olympiad (OMK)** (1000+ participants), *PERSAMA* Dec 2015
1st Prize (2015), Qualified for the selection test to represent Malaysia at the IMO. ⇒[1]
13. **Loyalty Hackathon** (30+ teams), *Tune Protect* July 2023
1st Runner Up, MYR 5,000 (~USD 1,200) ⇒[1]
14. **AIGC Competition** (50+ teams), *Bricks* Nov 2023
1st Runner Up, Sponsored trip to forum meeting (China) ⇒[1]
15. **MCMC Datathon** (50+ teams), *Malaysian Communications and Multimedia Commission* Nov 2025
1st Runner Up & Best Presenter, MYR 3,500 (~USD 800); Sponsored trip (Malaysia) ⇒[1]
16. **SUI Hacker House MY** (20+ teams), *SUI Foundation* Mar 2025
1st Runner Up, MYR 3,000 (~USD 700) ⇒[1]
17. **Science Bowl** (100+ teams), *UTAR* Mar 2019
1st Runner Up ⇒[1]
18. **Payment Network Digital Campus 2023** (30+ teams), *Payment Network Malaysia* Dec 2023
2nd Runner Up PDC Summit, MYR 20,000 (~USD 4,600) ⇒[1]
19. **Payment Network Digital Campus 2024** (30+ teams), *Payment Network Malaysia* Dec 2024
2nd Runner Up PDC Summit, MYR 30,000 (~USD 6,700) ⇒[1]
20. **Can You Hack It Hackathon** (80+ teams), *Hong Leong Bank* Nov 2023
2nd Runner Up, MYR 2,500 (~USD 600) ⇒[1]
21. **IOTA Hackathon Malaysia** (20+ teams), *IOTA Foundation* Feb 2025
3rd Runner Up, USD 1,500 ⇒[1] [2]
22. **Build On Malaysia Hackathon** (10+ teams), *Amazon Web Service Hackathon* Dec 2020
3rd Runner Up, USD 1,600 ⇒[1]
23. **Malaysia National Mathematical Olympiad (OMK)** (1000+ participants), *PERSAMA* Dec 2015
3rd Prize (2016), Qualified for the selection test to represent Malaysia at the IMO. ⇒[1]

APPLICATIONS

SEAVIP: Real-Time Face Recognition Social Enhancement for Visually Impaired People

<https://github.com/jingjie00/SEAVIP>

- A **machine learning** integrated mobile **social assistant application** for **visually impaired people**. The executable application and functionality details are available at: <https://seavip-app.web.app>
- Collaborated & supported by **Malaysian Association for the Blind (MAB)** and received **high positive feedback (~5/5 ratings)** during the post-project review with **8 visually impaired people**.
- **Final Year Project** was awarded as a **dual recipient** of the **UTAR Innovation & Creativity Award 2024** and the **UTAR SDG Merit Award 2024**.

Self-Coded Physical to Online Restaurant Menu Conversion System

https://github.com/jingjie00/phy2online_menu

- A **digital transformation application** for **traditional restaurants** to **convert their existing paper menu** to an **online system** with only a **camera scan**.
- **Undergraduate Research Scheme Project** completed with **commendation** as part of a **postgraduate research collaboration**.

SKILLS

Languages	English, Chinese, Malay, Hokkien, Cantonese
Programming Languages	Python, Java, JavaScript, C, C++, MIPS, Go, R
Machine Learning	PyTorch, OpenCV, TensorFlow, Keras
Frontend & Application	HTML, CSS, Bootstrap, jQuery, XML, React.js
Web-2 & Distributed Computing	Firebase, GCP, AWS, Azure, ACP, Node.js
Web-3 & Technologies	MasChain, Aptos, IPFS, Remix, Spheron
Databases	PostgreSQL, MariaDB, SQLite, DynamoDB
Hardware Systems	Arduino, Raspberry
Multimedia Tools	Adobe Photoshop, PremierePro, AfterEffect, OBS, Mixer
Office Tools	LaTeX, iWork, Microsoft Office, Publisher, Visio, Project, Access

CERTIFICATIONS

Huawei ICT Certification

- HCIP: *Datacom Network Automation Developer*; HCIA: *Artificial Intelligence, Datacom, Security*

Amazon Web Services (AWS) Certification

- AWS Cloud Practitioner

Microsoft Certified Professional Certification

- MC: *Azure AI Fundamentals, Security, Compliance, and Identity Fundamentals, Azure Data Fundamentals, Azure Fundamentals*

Alibaba Cloud Certification

- ACS: *Machine Learning*;
- ACP: *Cloud Computing*; ACA: *Cloud Security, Cloud Native, System Operator, Developer, Database, Big Data*

GUEST ACTIVITIES

National Yang Ming Chiao Tung University (NYCU), Taiwan (2024) - Guest Lecturer

- *Machine Learning Application Introduction* - Invited by Prof. Shih-Yu, Lo (Cognition and Communication Laboratory)
- *Personality Recognition Application* – Invited by Prof. Po-An, Chen (Economics and Computing Laboratory)

Institute of Electrical and Electronics Engineers (IEEE) EEPIS branch - Guest Speaker

- *International Webinar: Unlock Global Potential* – Invited by Mr. M. Rizky Pratama (Chairperson IEEE, EEPIS branch) ⇒[1]

PayNet Digital Campus 3.0, Malaysia (2025) - Guest Speaker

- *UTARPay Application* - Invited by Payment Network (PayNet) for Annual PDC Summit

Universiti Tenaga Nasional (UNITEN), Malaysia (2023) - Guest Judge

- *Hack@10 Hackathon* - Invited by Dr. Rohaini Binti Ramli (College of Computing and Informatics) ⇒[1]

MEMBERSHIPS AND FELLOWSHIPS

- **beVisioners: The Mercedes-Benz Fellowship** – Fellow (Cohort 3, 2025)
- **UTAR Student Representative Council (SRC)** – Postgraduate Rep. (2023/2024/2025) &– Faculty Rep. (2020/2021)
- **UTAR Ambassador** (2021) – University Appointed
- **Mensa Malaysia** – Executive Committee (2023/2024)

MISCELLANEOUS

- Certified **First Aider** (Basic First Aid + CPR)
- Certified **PCEIA & CEILLI**

REFERENCES

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(alternative: <https://tan-jingjie.web.app>)



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Google Play

<https://play.google.com/store/apps/dev?id=569972938771563748>



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AppGallery

<https://appgallery.huawei.com/app/C104648335>