



Ts. Tatchanaamoorti BSc (Hons) London, MSc USQ Australia, FBCS (Certified Assessor), IET MIET UK.

Head of Program for Bachelor Computer Science, Senior Lecturer.

Head of Program for Master of Computer Science by Coursework.

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Professional Membership

Train the Trainer TTT- HUMAN Resource Development Fund

Malaysia Board of Technology Certification-Graduate Technologist.

Member of the Institution of Engineering and Technology-MIET, UK

Technology Professional Ts. Certification from Malaysia Board of Technology.

Fellowship British Computer Society FBCS

Fellowship British Computer Society- Certified Assessor (FBCS only)

Certified IB Examiner.

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1.Biodata

Ts.Tatchana FBCS is a highly accomplished computing lecturer and researcher with a passion for advancing technology education and empowering students to become innovative problem solvers. With over 22 years of experience in academia, he has made significant contributions to the field of computer science and has been recognized for her expertise in various areas of computing.

Ts.Tatchanaa FBCS completed his bachelor's degree in computing at University of Greenwich, London, where he developed a strong foundation in programming, algorithms, and data structures. Her passion for teaching and research led him to pursue a Ph.D. in Education Technology, focusing on Metaverse and artificial intelligence applications. His doctoral research involved developing novel learning platforms for natural language processing and data analysis. During his Master graduate studies in University of Southern Queensland, Australia, Ts.Tatchanaa served as an internal tutor, where he discovered her natural ability to communicate complex concepts in a relatable manner ,sparking students' interest and fostering their understanding. This experience ignited his enthusiasm forteaching, and he decided to pursue a career in academia to make a broader impact on the next generation of computing professionals.

As a computing senior lecturer at Manipal International University, Ts.Tatchanaa has held positions at leading universities, where he has designed and delivered courses in various computing disciplines, including simulation, computer network, artificial intelligence, and mobile computing. His teaching style is characterized by a hands-on approach, encouraging students to engage actively in practical projects and develop critical thinking skills.

Ts.Tatchanaa research interests span several areas of computing ,with a particular focus on virtual reality, natural language processing, and human-computer interaction. He has collaborated with industry partners on research projects, leveraging his expertise to develop innovative solutions for real-world problems. Beyond his academic pursuits, Ts.Tatchanaa is an advocate for diversity and inclusion in technology. He actively participates in initiatives promoting gender equality and encouraging underrepresented groups to pursue careers in computing. He regularly mentors' students and organizes workshops to inspire young individuals to embrace technology and its vast possibilities.

Ts.Tatchanaa is a sought-after evaluator at international conferences and has delivered keynote addressesontopicsrangingfromAlethictothefutureofcomputingeducation.He is also a dedicated reviewer for esteemed Malaysia International computing journals, contributing to the academic community's rigorous evaluation process.

Through his teaching, research, and advocacy, Ts.Tatchanaa continues to shape the next generation of computing professionals, fostering a deep understanding of technology and

its potential for positive change. His dedication to education, combined with his expertise in cutting-edge computing domains, makes him a respected figure in the field, inspiring students, and colleagues alike.

2. Work Experience

Senior Lecturer cum Head of Program for BCS

March 2021-Present-MILA University (Formerly known as Manipal International University).

Ts. Tatchanaa works as Head of Programme and Senior Lecturer in the Department of Computer Engineering and Computer Science, School of Engineering and Computing, MILA University [Formerly known as Manipal International University (MIU)] where he is assigned to administer the Bachelor of Computer Science (Hons.) programme and works related in the department to meet EAC accreditation and MQA accreditation requirements. He is leading the task to introduce new engineering and computer science courses in his department covering both undergraduate degree and postgraduate study courses. He is also involved in teaching and learning which he is passionate about in lectures, tutorials, and laboratory sessions related to computer and electronic engineering subjects. Besides that, he also guides students attentively in their final year projects and dedicates himself to contributing progressive results in research, publications, and grants securement as well as connecting the university with industry for potential collaborations. Besides administrative, teaching, and research work here, he is also in charge as the academic editor for organizing the university's quarterly newsletter (E-Hive MIU Newsletter) to showcase the development, progress, events, and information about the university to its stakeholders. He is also a member of the Teaching and Learning Committee in the University to implement various action plans to increase teaching and learning quality across all courses provided in the institution. Prior to current appointments, he had also contributed to coordinating internship placement for computer science students as an Industrial Training Programme (ITP) Coordinator via his network with industrial companies as well as managing final year project coordination as Final Year Project (FYP) Coordinator for engineering students in his department. Besides, he also is an Integrated Design Project /Capstone Project (IDP) Coordinator where he coordinates and strategizes the planning and assessments for students' group projects for technical hands-on learning.

Part Time Senior Lecturer–Ongoing

Inti International University, Nilai.

He is also involved in teaching and learning which he is passionate about in lectures, tutorials, and laboratory sessions related to computer and electronic engineering subjects. IBM 4201 Cloud Security one of the subjects assigned to deliver lectures and labs.

Jan 2024 – May 2024

He has taught 2 different courses, NET 4204 Network Security and NET 3204 Wireless and Mobile Communication.

Full time Lecturer Sept 2019– March 2021-University Malaysia Computer Science and Engineering UNIMY

Ts.Tatchanaa was invited to serve as an academician and researcher in the Faculty of Computer Science and Engineering at University Malaysia of Computer Science and Engineering UNIMY with his relevant expertise in AI, Data science, Internet of Things(IoT),to provide lecture for computer science subjects for undergraduate students. His job scope includes conducting active research and publications, teaching passionately in lectures, tutorials, and laboratory sessions, to guide students attentively in their in final year projects, to coordinate systematically student's internship program, to manage and strategize research works in the research center and to carry out administration duties in the faculty. Besides his academic duties, he also consistently maintained close network and collaboration with the industry partner on research projects. He is an active consultant to several companies in the industry and maintains collaboration research projects with them mainly in semiconductor engineering, process optimization and yield improvement.

He had also successfully adapted his outstanding teaching pedagogy based on Gagne 9 Event of Instruction into his application of his invention “An Interactive Whiteboard System” to facilitate blended learning and e- learning development in his faculty. He also works as an active consultant linked with industry partners. He was also appointed as secretary for the Research Center for Sustainable Communication System and IoT (CSCI) to lead on and coordinate research works for the center as well as organize industrial collaboration such as workshops, seminars, training, and industrial talks for clients from the industry and academics.

Senior Trainer A-Star Tech October 2017– Sept 2019

IT Senior Trainer at A-Star Tech can vary depending on the specific organization and its needs. Design and develop training programs and materials for IT-related topics, ensuring they align with organizational goals and industry best practices. Ts.Tatchanaa create curriculum outlines, lesson plans, and learning objectives for various IT training courses. Conduct training sessions for IT staff or end-users, using various teaching methods such as lectures, hands-on exercises, and multimedia presentations. Gather feedback from training sessions and continuously improve training programs based on evaluations and industry changes. Integrate technology tools and platforms into training programs, such as e-learning platforms, simulation tools, and virtual labs.

Full Time Lecturer April 2016- July 2017 Malaysia University of Science& Technology MUST

Teaching Diploma, Bachelor, and Master Courses and hold Head of Program for Diploma in IT. Communication Disseminate conceptual and complex ideas to a wide variety of audiences using appropriate media and methods to promote understanding. Communicate, research finding a search seminar. Communicate research findings at national (or above) conferences. Write papers for delivery at Research seminars. Write papers for delivery to appropriate subject-specific conferences and colloquium.

Sessional Lecturer Oct 2015 April 2016 Monash University Malaysia

Conducting FIT 2034 Introduction to Java programming and ENG 1003 Mobile Application Programming. Courses conducted for Bachelor level. He is also involved in teaching and learning which he is passionate about in lectures, tutorials, and laboratory sessions related to computer and electronic engineering subjects.

PhD Researcher July 2012–Sep t2014 PhD in Computer Science–UTM-Deferred

I have started my PhD initially in University Technology Malaysia UTM back in 2012. Unfortunately, I have deferred my PhD due to some personal issue. My research area is on Sensitive detection and qualitative analysis of atherosclerotic plaques are in high demand in cardiovascular clinical settings. The leukocyte– endothelial interaction mediated by an adhesion molecule P-selecting participates in arterial wall inflammation and atherosclerosis. CT and support vector machine diagnosis the plaque image classification on the early stage.

Research Assistant, Brunel University London Jun 2011–May 2012

I have started my Research assistant work remotely collaborated with Brunel University London.

Designing forms for data collection

Coordinating with the ethics committee to gather daily updates.

The ethics committee is responsible for the well-being of the subject's rights and safety.

University of Southern Queensland, Casual Tutor Jun 2008–Dec 2008

I have been offered part time tutor to teach undergraduate students in University of Southern Queensland, Australia.

Teaching Foundation Computing CSC1402

Marking CSC1402 assignments and Exam papers (On-campus & Off-campus)

University of Southern Queensland, Internal & External Marker Jun 2007–Dec 2007

Marking assignments and exam papers for (CIS3008) Project Management and System Planning course, (on-campus & off-Campus students)

Grading assessment officer for Computing Theory

McOrange International College, Senior Computing Lecturer Feb 2006– Jan 2007

I have been offered part time examiner position to assessed undergraduate student's grade. Below is the subject offered:

Course Examiner for Data Communication and Wireless Technology.

Internal Marker for Data Communication, Wireless Technology.

Nirwana College, Senior Computing Lecturer Jan 2005 –Dec 2005.

Course examiner for Information System Management.

Mantissa College, Computing Lecturer Feb 2004– Dec 2004

Teaching Information System Management

Course examiner for Information System

Gemilang College, Senior Information Technology and Business Lecturer Jan 2003 – Dec 2003

Head of Department for International Student Affair

Course examiner for English Language

3. Professional Membership

Professional Technologist

This license certifies Ts.Tatchanaa as a registered professional technologist on 7th July 2023 under the Technologist and Technician Act 2015 with registration number PT23070225 with Malaysia Board of Technologists(MBOT).

Fellowship- British Computer Society (995136636)

This license certifies Ts.Tatchanaa as a Certified Fellowship on 22/01/2024 by British Computer Society.

HRDF Certified Trainer TTT

15th November 2019

This license certifies Ts.Tatchanaa as a Certified Trainer on 15th November 2019 under HRDF with registration number TTT/26935.

Member of Institution of Engineering and Technology MIETUK

12th December 2022

This license certifies Ts.Tatchanaa as a Member of IET UK on 12th December under IET council UK.

4. EDUCATION

April 2022–Dec 2024

PhD In Education Technology Manipal Global Next University.

Project area: Impact of Metaverse Technology in Higher Education curriculum.

Feb 2007–Nov 2008

Master of Computing University of Southern Queensland Australia.

Thesis title: Cancer classification using Support Vector Machine Techniques.

July 2002-June 2004

BSc (Hons) in Computing University of Greenwich, London.

Thesis title: E-Learning software for Deaf Children.

Jun 2001– Jun 2002

Advanced Diploma in Computer Studies, Systematic College (SEGI University)

May1999–Jun2001

International Diploma in Computer Studies NCC UK, TAFE KUALA LUMPUR

5. Teaching Record

Ts.Tatchanaa involves in the course coordination, subject coordination, syllabus structure development, content development, assessment preparation and teaching in the lectures, tutorials and lab experiment sessions (for engineering and science subject only) for the following subjects:

Information security

Network security

C++programming

Medical Imaging (Image segmentation, classification, and Reconstruction)

Operating Systems

Structured Programming

Artificial Intelligence AI

Machine Learning ML

Systems Analysis and Design

Introduction to Information Technology

Human Computer Interaction

Introduction to Computer Security

Information Systems

Web Development

Introduction to Multimedia

Basic Business Administration

E-Business

Information Systems Design

Software Project Management

Internet Commerce Technology

6. Teaching Evaluation

Ts.Tatchanaa teaching pedagogy based on Gagne 9 Events of Instructions and his emphasis in interactive teaching and learning via adaption of blended learning flip learning and interactive based learning had been well received by his fellow students and also acknowledge with teaching.

His teaching evaluations are as follows:

Year 2024: 90.09/100%- with evaluation as far exceeding expectation

Year 2023: 90.09/100%- with evaluation as far exceeding expectation

Year2022: 94.33%/100%– with evaluation as far exceeding expectation.

Year2021:89.75%/100%– with evaluation as far exceeding expectation.

7. Research Projects

Virtual Innovation Competition 2024(Silver Medal- Tertiary Science and Technology).

- A. BRAIN TUMOR DETECTION USING CNN- SILVER AWARD- by Ts
Tatchanaamoorti Purnshatman, FBCS and student Mr Syabil from Department of
Computing.



Designing and assessing a Metaverse-Based Curriculum Model for Enhancing Student Learning Outcomes and Experiences in Medical Anatomy Education.

Manipal Global NXT University, May2022–Present.

9. Journal Publications

2024

Wonderful Shammah Kaitane¹, Sahayog Shrestha¹, Chong Peng Lean^{*1}, Tatchanaamoorti Purnshatman^{*1}, Poh Kiat Ng², Feng Yuan Kong², Mohammed Reyasudin Basir Khan ³ (2024). Immersive Horizons: Exploring Virtual Reality, Augmented Reality, and the Metaverse in Game Development - A Review. Malaysian Journal of Science and Advanced Technology (MJSAT).

DOI: <https://doi.org/10.56532/mjsat.v4i3.309>

Tatchanaamoorti Purnshatman Nursyhira Azad Abul Kalam Azad, Mohammed Reyasudin Basir Khan, Chong Peng Lean. The Impact of Leadership Training and Development on Employee Job Performance in Manufacturing Sector, Malaysia. A Review. Malaysian Journal of Business, Economics and Management.

Tatchanaamoorti Purnshatman Rozita Zahari, Mohammed Reyasudin Basir Khan, Chong Peng Lean. Investigating the Impact of Gender on Leadership Styles and Career Progression in the Malaysian Workforce. A Review. Malaysian Journal of Business, Economics and Management.

Tatchanaamoorti Purnshatman Kar Woh Lon, Mohammed Reyasudin Basir Khan, Chong Peng Lean. Application of Regression Analysis in Forecasting Mobile Broadband Subscriptions Growth for Malaysia. A Review. Malaysian Journal of Business, Economics and Management.

2017

Datukun Kalamba Aristarkus, Sellappan Palaniappan, Tatchanaamoorti Purnshatman. Hybrid Topology Design for Improving Network Performance. Experimental. Global Journal of Computer Science and Technology.

2016

Datukun Kalamba Aristarkus, Sellappan Palaniappan, Tatchanaamoorti Purnshatman. Towards proposing network topology upgrade in Salem University Lokoja. International Journal of Computer Networks and Communications Security (IJCNCs)

Datukun Kalamba Aristarkus, Sellappan Palaniappan, Tatchanaamoorti Purnshatman. Towards proposing network topology for improving performance in Plateau State

University Borkos. International Journal of Computer Networks and Communications Security (IJCNCS)

Datukun Kalamba Aristarkus, Sellappan Palaniappan, Tatchanaamoorti Purnshatman. Proposing Minimum Performance of Proposed Topology in Plateau State University. International Journal of Computer Networks and Communications Security (IJCNCS).

Magazine

Info Med magazine Jan - March 2015 issue 12 KDN-PP17588

Brain Tumor Classification using Support vector machine

On going Manuscript 2024:

Tatchanaamoorti Purnshatman ^{1,*}, Chong Peng Lean ¹, Vasanthamalar Kesavan ¹, and Ng Poh Kiat ^{2*}. A Review. Leveraging the Metaverse for Enhanced Human Anatomy Education: A Comprehensive Review of Innovative Teaching Methods and Technological Integration". **MDPI Sustainability Q2**

Tatchanaamoorti Purnshatman ^{1,*}, Chong Peng Lean ¹, Silvia Ganesan ¹, Ng Poh Kiat ^{2*}, and Pareven². A Review. Humanoid Robots in Higher Education: Evaluating the Current State and Future Potential. **MDPI Sustainability Q2**

Peer Review My Web of Science

AI and ML in IR4.0: A Short Review of Applications and Challenges
Malaysian Journal of Science and Advanced Technology
WOS_REVIEW_ID:23349550

Transformative Applications of IoT in Diverse Industries: A Mini Review
Malaysian Journal of Science and Advanced Technology
WOS_REVIEW_ID:23349573

A Raspberry Pi-Powered IoT Smart Farming System for Efficient Water Irrigation and Crop Monitoring
Malaysian Journal of Science and Advanced Technology.
WOS_REVIEW_ID:23349749

10. Programme Committee

Representative for Degree & Master in Faculty of Maths & Computing, USQ

Representative for Degree & master's in teaching & Learning Unit, USQ

Representative for Degree & Master in Faculty of Advising committee, USQ.

Information & Computing System, Brunel University.

Council Australia Postgraduate Association CAPA

Bioinformatics Australia Society.

Experimental Molecular Imaging, UNIKLINIK RWTH AACHEN GERMANY

11. Public and Professional Service

Project Collaborator for Ultra Engineering Malaysia.

May 2024 to ongoing

ECG Brain Signal Measurement Project, to collaborate project. In machine learning with the ECG product provided by the company for research FYP/Master.

Project Collaborator for Pentamaster Corp.

July 2022 to Present

The project collaboration covers the setup of electrical/electronic lab with university-industry cadet ship programme with the company related to semiconductor equipment manufacturing technology and its employee training programme via cadetship initiatives.

12. Conference/Seminar

Cambridge Generative AI in Education Conference 2024, to be held from **16th to 17th October** in Cambridge, United Kingdom. (Invited as a Presenter) in University of Cambridge, UK.

Medical Cardiac Imaging collaboration workshop National Institute of Heart, Malaysia.

Research Methodology presentation at National Institute of Heart, Malaysia.

Practical Bioinformatics Workshop 2014 CARIF Cancer Research Initiatives. Foundation High Impact Journal Writing and Evaluation Workshop University Technology Malaysia Journal Club University Hospital Aachen, Germany.

Medical Imaging Seminars at UKM by visiting scholar: Prof Dr. David Townsend (co-inventor of PET/CT scanner)

MQA Training:

Workshop 1: Understanding Malaysian Qualifications Framework 2nd Edition, Standards, Programme Standards and Guidelines to Good Practice. By Prof Lee Chew Ging

(MILA University) *Based on MQA guidelines, all academic staff must complete CPD training of 40 hours per year.*

Understanding Standards: Master's and Doctoral Degree 2nd Edition and Preparing MQA-02 for a Research Postgraduate Degree. By Professor Hazman Shah Bin Abdullah (Panel & Former Deputy CEO, MQA)

(Mila University) *Based on MQA guidelines, all academic staff must complete CPD training of 40 hours per year.*

Workshop 2: Understanding Programme Accreditation (COPPA) 2nd Edition.

By Prof Lee Chew Ging (Mila University). *Based on MQA guidelines, all academic staff must complete CPD training of 40 hours per year.*

Workshop 3: Managing Table 1, Table 2, Table 3, Table 4 and Table 5 of COPPA

By Prof Lee Chew Ging (Mila University). *Based on MQA guidelines, all academic staff must complete CPD training of 40 hours per year.*

Engineering Accreditation Council Malaysia EAC Training

EAC/ETAC Audit Preparation Workshop

16/7/2024 – 18/7/2024

(Mila University)

Speaker: Module 1 Ir. Assoc. Prof. Dr Siva Kumar Sivanesan.

Module 2 Ir. Assoc. Prof. Dr. Saiddi Ali Firdaus Mohamed Ishak.

Module 3: Ir. Dr. Balamurugan Annamalai Gurunathan.

Mock Audit: All speakers

13. Skills

- Leadership and Management
- Effective Teaching and Learning Strategy
- Development of Teaching Pedagogy
- Research and development
- Research writing and publication
- Project Management
- Design and Prototyping
- Public speaking
- Mentoring, Coaching and Teaching.
- Effective Communication
- Product characterization
- Practical Skills
 - C#, C++,
 - Web and Application Security

14. Languages

English- -Full Professional Proficiency for writing, reading, and speaking.

Bahasa Malay -Full Professional Proficiency for writing, reading, and speaking.

Tamil language -Full Professional Proficiency for writing, reading, and speaking.

15. Links

LinkedIn: <https://www.linkedin.com/in/tatchanaamoorti-purnshatman/>

Google Scholar: https://scholar.google.com/citations?user=R_KhAYQAAAAJ&hl=en

References.

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