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47100 Selangor, Malaysia.

Gender: Male
Nationality: Malaysian



Career Objective

- To work in a dynamic and positive atmosphere, which promotes creative and innovative R&D culture, with a great team that has strong passion and enthusiasm.
- To demonstrate my strong program and project management skills, consultancy skills, in-combination of my rich experiences in technical and research; especially in the domain of Hadoop-Spark, Real-time Big-data Analytic in e-Commerce, Healthcare and Telecommunication Systems, Internet of Things (IoT) for cutting-edge technology solutions.

Area of Research Interest

Real-time Big-data Analytic (Hadoop-Spark Eco-systems, Vertica), Machine Learning and Analysis, Semantic Technology, High Speed Computing, Artificial Intelligent (AI).

Education Background

Level: Master of Computer Science, University Of Malaya, Malaysia
Field Of Study: Image Processing & Computer Vision, Bio-Modeling Systems, Computer Graphics, High Performance Computing
Research Topic: [Dynamic Mechanic Of Fiber-Fluid Model Of Human Heart Using High Speed Computing Technique](#)
Graduation Date: August 2005

Level: Bachelor's Degree (Honors), University Of Malaya, Malaysia
Grade: 1st Class (3.71 out of 4.00)
Field Of Study: Computer Science and Information Technology, major in Artificial Intelligence
Thesis Title: [Dynamic Bandwidth Allocation implementing Neural-Fuzzy Technique Simulated in JAVA Network Simulator](#)
Graduation Date: March 2002

Summary of Working Experiences

5+ years of experiences in Big-data Real-time Analytics and Visualization in HP and HPE, involving technologies such as Apache Hadoop, Kafka, Apache Spark, Elasticsearch, SAS, Autonomy and Vertica.

- Led a team of 4, delivered Hadoop-Spark Real-time Intelligent Analytic & Visualization platform for rapid PoC development. ([Details](#))
- Delivered solutions in Real-time Prediction, Classification and Outlier Detection implementation using Spark MLlib. ([Details](#))
- Worked as Solution Architect for Spark Real-time Healthcare IoT Monitoring Analytic Solution for Hospital in Europe. ([Details](#))
- Be the Hadoop Consultant for ETL solution for local vendor to serve the largest telecommunication company in Malaysia in 2017.
- Worked as a program manager, driving a center wide and technology practice initiatives in Big-Data Era Evolution Program (BEEP), Hackathon, and launch of Digital Revolution in HPE campus at Cyberjaya, which involved roughly 150 participants in 2016.
- Worked as a project manager, project lead, delivered 9 projects in 3 years.
- Worked as Data Scientist, delivery 1 project and won 1 competition using open government data.
- Led a team of 4, delivered 2 Hadoop-based proof-of-concept solutions.
- Led a team of 30+ people in organizing site-level programs for employees' up-skilling and employees' engagement.
- Led a team of 2, delivered 2 Autonomy-based proof-of-concept.
- Delivered 6 white papers, received center-wide Top Paper award and HP CIO Recognition on Outstanding Idea Award.
- Involving in EG TS Attach & Annuity Business Intelligence IT project to drive sales growth at the WW level using SAS 9.3 & 9.4 and SAS Enterprise Miner (EM) as the advanced analytics tool, especially in performing partner segmentation and clustering for extracting insights embedded in the data.
- Involved in multiple visualization technologies in report creation, such as QlikView, Tableau and Grafana (Real-time visualization tool) etc.

8 years of experiences in Computer Vision & Image Processing technologies, including machine vision inspection, biological computation simulation and visualization:

- Delivered 4 industries products.
- Prototyped 4 in-house machine vision solutions.
- Explored and designed a machine vision project on quality inspection to achieve faster and higher aperture count (more than 1 million apertures, 75 micron in diameter) and 100% inspection coverage for wafer bumping and solar industry stencil.
- Designed and developed 2 projects on bio-modeling simulation and visualization, leading to 2 journal papers publications.

7 years of experiences in Artificial Intelligent including various Neural Network, Fuzzy logic, Genetic Algorithm and Machine Learning:

- A seasonal developer of AI components (e.g. Solving Travelling Salesman Problem using GA); Code is available [online](#).
- Designed and developed Neural-Fuzzy algorithm for ATM network simulation during undergraduate study.
- Co-supervised 2 master students in Genetic Algorithm research and implementation.
- Experienced in Apache Hadoop and Apache Mahout for large data set processing.

3 years of experiences in Semantic Technology including:

- Secured a total of 5 science funds from Ministry of Science and Technology Malaysia for Image Understanding research projects.
- Published 6 conference papers; disclosed 12 patents, filed 4 patents and 8 pending applications in progress.
- Developed an image understanding prototype system using multiple low-level visual features incorporate in ontology for objects identification and image annotation.
- Integrated Image Understanding to Linked Open Data (LOD) to enrich image content and annotate images by constructing the conceptual graphs as knowledge representation.
- Developed a prototype on Ontology Independent Question Generation for the Intelligent Learning Management System (iLMS).
- Session chairs of the 2010 and 2012 International Conference of Semantic Technology and Knowledge Engineering in Malaysia.

13 years of experiences in software development in-depth knowledge in Visual C#, Visual C++, C, Java & Web development technology:

- 5 years of experiences in Visual C#, successfully delivered 4 industries machine vision solution over multiple system development life cycles.
- 2 years of experiences in Visual C# integration with an existing framework, successfully delivered 1 automation system from system design until on site production testing, adopting CMMI Level-3 process.
- 1 year of experience in bio-information web portal development (covering 1st phase delivery using PHP, MySQL, AJAX technologies).
- 2 years of experiences in Visual C++ on software development and testing.
- 2 years of experience in C/C++/OpenGL on biological computation system prototyping, research & development.
- 3 years of JAVA & Web Service experiences, delivered 4 software components integrated into SOA platform, adopting CMMI Level-5 process.

5+ years of experiences on entrepreneurship and consultancy works, including:

- Hold the role of Data Scientist and ecommerce actionable analytic IT Advisor of the Malaysia largest office equipment retail company.
- Big-data Hadoop & Real-time analytic consultancy works in Malaysia largest Telecommunication Company.
- Awarded 4 government grants and delivered successfully.
- Delivered 4 industry customers projects.
- 2 years of experiences in pre-sale, sale and post-sale activities.

Working Experience

DXC Technology www.dxc.technology/my

Apr 2017 – Present

IT Expert / Solution Architect

- Similar to previous role and responsibility in HPE as DXC Technology is a split-merge company from HPE ES Division with CSC (Computer Sciences Corporation).

Hewlett-Packard (HP) Multimedia Sdn. Bhd. www.hp.com

Sep 2012 – Mar 2017

IT Expert / Solution Architect / Data Scientist

Responsibilities :

- Lead R & D on Real-time or batch processing Big-data analytic systems by architecting and implementing, on various Proof-of-Concept solutions.
- Lead R & D on innovative data analytic solutions for latent information discovery from large amount of structure, semi-structured and un-structured data.
- Manage a team of peoples to set up Hadoop processing environment, (consists of HBase, Hive, Flume, Sqoop, Oozie, Mahout, Pig, Map-Reduce program development environment, MapR admin and etc).
- Manage multiple diverse teams, consist of roughly 25~30 peoples located from Malaysia, China, Mexico and India; facilitating discussion and communication platform in driving toward problem solving, removing obstacles and archiving consensus.
- Manage multiple projects in Business Intelligent domain, from scope analysis, requirements gathering through development phase, testing phase until UAT and project delivery to end user.
- Responsible as Reusable-Component contest lead in Malaysia, reviewer and selecting the winner of the contest.
- Responsible in requesting source data, understanding, cleaning, validating and preparing analyzable data, by following CRISP-DM methodology. Performing Segmentation and Clustering methodology using SAS EM for concluding insights from the data.
- Manage multiple PoC projects and communicate closely with business users to capture features that contribute significantly to business values and translate them into PoC system.
- Responsible in building big-data analytic skillsets (Spark, Kafka, Hadoop, Autonomy and Vertica) within the team to cultivate and contribute on potential projects.
- Participate and contribute efforts in Hadoop, Autonomy and Manufacturing Execution System (MES) Center of Practice (CoP) at hp.com Tech team in Malaysia.

Accomplishments:

- Built-up in-depth hands-on experiences on Spark, Kafka, MLlib and complete the development of Real-time Intelligent Analytic & Visualization platform for proof-of-concept development.
- Built-up in-depth hands-on experiences on Hadoop and Vertica technologies.
- Contributed efforts in a big-data analytic project, which processes daily 80GB of log data in 16 data nodes Hadoop clusters, output data into HBase and Vertica servers.
- Successfully conducted and delivered a center wide and technology practice initiatives in Big-Data Era Evolution Program (BEEP), consists of 14 sessions, 15 Hadoop Eco-systems technologies, and a Hackathon event which involved roughly 150 participants in 2016.
- Successfully coached 6 interns in completing HPE works and assignment, graduated from their university program in 2016.
- Successfully delivered 9 projects until year 2016. Involved into 2 projects which is in Red status and successfully turn it into Green by communicating with stakeholders, developers and release managers in achieving consensus between IT processes and project deliveries for enabling project to move forward even in a timeline pressured situation.
- Implemented 4 PoC systems based on Hadoop and Autonomy technology.

- Delivered 6 technical papers, related to Hadoop and Autonomy technology.
- Presented 1 paper on Autonomy technology in Tech Day event at HP ShangHai
- Presented 2 papers on Hadoop technology in Tech Day event at HP Malaysia.
- Published 2 posters on Autonomy and Hadoop technologies in New-style of IT competition at HP Malaysia.

MIMOS BERHAD www.mimos.my

Apr 2010 – Sep 2012

Staff Researcher

Responsibilities:

- R&D on Semantic-based Intelligent Software Components.
- Developed prototypes and demo systems to show capabilities of and practical problems addressed by semantic technologies, drove technology transfers to product groups, and helped create and execute incubation projects to [MIMOS Semantic Technology Platform](#).
- Developed AI related software as web service components contributing to [Intelligent Informatics Platform](#), which adopts SOA development environment.
- R&D on Image Understanding software components, which consists of various low-level image processing techniques, such as visual descriptors construction, image segmentation, features of interest extraction, color analysis and image classification
- R&D on low-level image processing mechanism in combination with semantic technologies for high-level conceptual knowledge analysis of images. Domain consisted of natural images, CCTV surveillance images and health care images, such as MRI, CT and X-Ray images.
- Generated and published patents related to semantic and image processing research domain.
- In-charged of organizing conferences, paper reviews, paper publications and knowledge sharing tasks.

Accomplishments:

- In-depth understanding of semantic technology knowledge such as RDF, RDFS, OWL, SWIRL, SPIN, JENA.
- Involved in ontology engineering and knowledge management processes.
- Published 8 papers, in which 3 papers focused on semantic technology domain, 5 papers related to image processing and analysis domain.
- Generated 12 patents ideas from year 2010 until 2012, 5 have been filed to date.
- Developed PoC system, entitled “Automatic Semantic Question Generation and Assessment System”.
- Developed Image Understanding PoC system, which consists of several components, namely: Visual Features Extraction, Object Conceptualization, Spatial Relationship Extraction and Scene Conceptualization.
- Assisted in organizing 3 major AI conferences in Malaysia from 2010 until 2012.

TechEye Technology Sdn. Bhd.

Aug 2007 – Apr 2010

R&D Software Manager

Intel MSC Sdn. Bhd.

Jan 2006 – Aug 2007

Automation Software Engineer (Tech Lead)

University of Malaya

Nov 2003 – Dec 2005

Research Assistant / Master Student

Equisys Solutions

Jan 2003 – Oct 2004

Project Manager / Business Development Manager

Thomson Multimedia (R & D Center Malaysia)

Mar 2002 – Dec 2002

Software Engineer

IBM Malaysia Sdn. Bhd.

Jan 2000 – May 2000

Industrial Trainee

Awards

1. Consolation award of 33 hours Hackathon based on government Open Data by MAMPU, 9th-10th Sep 2015
2. Certified ScrumMaster from Scrum Alliance, 11th Jan 2014.
3. Cloudera Certified Developer for Apache Hadoop (CCDH), Exam CCD-410 (CDH4), 13rd Feb 2013.
4. Statement of accomplishment from online self-learning courses @ [Coursera.org](https://www.coursera.org): Machine Learning, Computing for Data Analysis, Image and Video Processing
5. Gold Medal award of the IPTA Expo 2005, PWTC, 2nd Oct 2005.
6. “Saintis Cemerlang 2005” (Excellent Scientist 2005) awarded by Ministry of Higher Education, 23rd Aug 2005.
7. ITEX Bronze Medal award of the 16th International Invention Innovation Industrial Design & Technology Exhibition 2005 (ITEX 2005), Kuala Lumpur, Malaysia, 19th – 21st May 2005.
8. Gold medal award of the Invention Exhibition of New Invention, Techniques and Products 2005, Geneva, 8th Apr 2005.
9. Others: Certificate of merit for Chinese Chess Competition University of Malaya 1999. Certificate of merit for National Physic Competition Pre-University level 1998.

Patents

1. **A method and system for identifying multiple entities in image.** PCT/MY2013/000255 Jun 19, 2014

- <http://www.google.com/patents/WO2014092548A1?cl=de>
2. **Image processing system and method for extracting a spatial relationship between objects in an image.** PCT/MY2013/000251 11 Dec 2013
<https://www.google.com.ar/patents/WO2014092546A1?cl=de>
3. **A system and method for automated generation of contextual revised knowledge base.** PCT/MY2013/000199 5 Jun 2014
<http://www.google.com.ar/patents/WO2014084712A1?cl=un>
4. **A system and method for dynamic generation of distribution plan for intensive social network analysis (SNA) tasks.** PCT/MY2013/000233
<http://www.google.com/patents/WO2014092536A1?cl=en>
5. **System and Method for Enhancing Accuracy and Relevancy in Natural Language Query Systems.** PCT/MY2013/000254 Dec 12, 2013
<http://www.google.com/patents/WO2014098561A1?cl=en>

Publication

1. Selvanathan, N., Tan, S. Y., Nagappan, S., M. Sankupellay. **"The fiber-fluid model of the human heart"**. Journal of Science & Technology in the Tropics, vol 1 (1), Jun 2005
2. Tan, S. Y., Selvanathan, N., Nagappan, S. **"Non-Invasive Method for Patient-Specific Virtual Heart Based on Fiber-Fluid Model"**. Journal of Mobile Multimedia, vol 2 (1), 2006
3. Tan, S. Y., Kiu, C. C., Lukose, D. **"Evaluating Multiple-Choice Question Generator"**. In 3rd Semantic Technology and Knowledge Engineering (STAKE 2011), vol. 0295 of Communications in Computer and Information Science (CCIS), UNITEN Putrajaya, Malaysia. (2011)
4. Tan, S. Y., Kiu, C. C., Lukose, D. **Ontology Independent Question Generator** in Demo Proceedings of the 3rd Malaysia Joint Conference on Artificial Intelligence, UNITEN Putrajaya, Malaysia, July 18-22, 2011.
5. Tan, S. Y., Kiu, C. C., Lukose, D. **"Ontology Independent Automatic Question Generation and Assessment"**. (To publish after related patent approved)
6. Tan, S. Y., Bong, C. W., Lukose, D. **"Building Detection with Loosely-Coupled Hybrid Feature Descriptors"**. In proceedings of the 12th Pacific Rim International Conference of Artificial Intelligence (PRICAI '12), vol. 7458 of Lecture Notes in Artificial Intelligence, Kuching, Sarawak, Malaysia (2012)
7. Tan, S. Y., Lukose, D. **"Semantic Hybridized Image Features in Visual Diagnostic of Plant Health"**. International Symposium on Agriculture Ontology Services (AOS 2012), 3-7 Sep, Sarawak, Kuching, Malaysia (2012)
8. Tan, S. Y., Lukose, D. **"Cognitive Semantic Model for Visual Object Recognition in Image"** In proceedings of International Conference on Multimedia and Signal Processing (CMSP'12), Communications in Computer and Information Science (CCIS), Vol. 346, p.67, 2012
9. Jasbeer, S. S., Tan, S. Y., Lukose, D. **"Learner Personalization using Emotion Analysis based on Facial Expression"**. International Workshop on Collaboration and Intelligence in Blended Learning (CIBL 2012), 3-7 Sep, Sarawak, Kuching, Malaysia (2012)
10. Mohamed, B. K., Hamed, H. F., Tan, S. Y., Lukose, D. **"Social Interaction Behavior Improvement System"**. The 3rd International Workshop on Empathic Computing (IWECC 2012), 3-7 Sep, Sarawak, Kuching, Malaysia (2012)

White Papers

1. Tan, S. Y., Lai, K. S., Tech Day 2013, HP Global Development Service, (2013). **Website User Navigation Intention Profiling Visual Analytic System**. HP Global IT, Cyberjaya, Malaysia.
2. Tee, M. S., Chen, J., Tan, S. Y., Lai, K. S., Tech Day 2013, HP Global Development Service, (2013). **Point of Sales Product Recommender Solution for Smart Hypermarkets**. HP Global IT, Cyberjaya, Malaysia.
3. Wayne, O., Chen, J., Ang, E. S., Mohd Taufik, A. H., Tan, S. Y., Lai, K. S., Tech Day 2013, HP Global Development Service, (2013). **Understanding Browsing Experience: ClickPath Explorer**. HP Global IT, Cyberjaya, Malaysia.
4. Tan, S. Y., Tee, M. S., Fadzril, M. M., Lai, K. S., Tech Day 2013, HP Global Development Service, (2013). **Competing Product Analyzer (CPA)**. HP Global IT, Cyberjaya, Malaysia.
5. Lim, M., Tan, S. Y., Yong, K. H., Lai, K. S., Tech Day 2013, HP Global Development Service, (2013). **Mining and Dissecting Online Opinions of HP Products**. HP Global IT, Cyberjaya, Malaysia.
6. Mooi, J. S., Leong, A., Tan, S. Y., Lai, K. S., Tech Day 2013, HP Global Development Service, (2013). **Autonomy Making Expert Search Easier**. HP Global IT, Cyberjaya, Malaysia.

Skills

Professional Fields

Solution Architect & Integration | Consultancy | Big-data Hadoop Technology (Spark, MLlib, Hdfs, Hbase, Hive, Flume, Sqoop, Mahout, Oozie, Map-Reduce, Pig) | People Management | Project Management | SAS 9.4 & SAS EM | Autonomy Software | Machine vision application development in semiconductor industry | Image Understanding, Image recognition, Signal and Image processing Techniques | Semantic Technology & Knowledge Management: RDF, RDFS, OWL, SKOS, SPIN, JENA, Linked Open Data (LOD), Conceptual Graph (CG) | Machine Learning | Bio-informatics in personal genotype data processing and web services | Biological Computational System, Modeling and Simulation | Virtual reality 3D visualization using Open-GL | High performance computing (Grid Computing Architecture) | Grid programming techniques using Microsoft C# NET framework | Genetic Algorithm | Graph Theory | Neural Network for pattern recognition and prediction | Fuzzy Logic | Asynchronous Transfer Mode network technology | Natural Language Processing

Technical Skills

Strong programming skills in Microsoft .NET C# (7 years), JAVA (5 years) | Excellent knowledge in C, C++ (6 years), JAVA Swing (3 years), Visual Basic 6 (5 years), Python (2 years), Ms. Visual C++ (2 years), JSP/Tomcat (2 years), Open-GL (2 years), Perl script (1 year), ASP (3 years), R-Programming (1 year) | Semantic Technology: TopBraid composer, AllegroGraph server | Knowledge in COM+, DCOM, DLL and J2EE | Knowledge in MS SQL administrator, setup and configuration | Database: MySQL and MS. SQL 2000 | Experience in VB Script, Assembly language, Visual Prolog, MATLAB, and Palm | Familiar with Window 98, 2000, XP, NT, OS400, IRIX 6.5 and Linux OS | Intermediate user to: Photoshop, MS Office, MS Project, SQL, Visio

and Lotus Notes | Web technology experience in SOAP UI for web service component testing, JMeter for performance testing, JSON, APACHE server, Yahoo UI, CSS, HTML/DHTML/XHTML, CGI Application Framework, Selenium automated testing tool, JavaScript, AJAX, PHP, XML and etc.

Training Accomplished

PMP | Cloudera Developer Training for Apache Hadoop | Autonomy – IDOL Server Essential 10| Vertica | QlikView Designer & Developer | Fundamental of Computer Vision with Medical and Video Application | Presentations Alive | Machine Learning Workshop | myTRIZ workshop | Advance Video Analytics and Emerging Video Surveillance | Introduction to Graph Theory | Introduction to UML | UML Design Expert | Business plan clinic | Step up Program for Entrepreneurs | Architecting Enterprise Software | Transform your research into business venture | Getting Start with .NET | ASP.NET | Programming with C# | Machine Learning, Pre-Calculus, Computing for Data Analysis, Image and Video Processing, Computational Photography, Web Intelligence and Big Data, Making Sense of Data, Computing for Data Analysis @ [Coursera.org](https://www.coursera.org)

Artificial Intelligent (AI) knowledge with related application samples:

- Genetic Algorithm (GA) In Solving Multi Variants Problem Implemented In Ms. NET C#
- ADALINE TDL Neural Network Simulation In C-Sharp (C#)
- Genetic Algorithm (GA) In Solving Vehicle Routing Problem
- AI 8-puzzle (8 Puzzle) solver
- Dynamic Bandwidth Allocation implementing Neural-Fuzzy (Neural Network + Fuzzy Logic) Technique simulated in JAVA Network Simulator

Language Proficiency

English(Speak=8, Write=8) | Chinese(Speak=10, Write=10),
Bahasa Malaysia (Speak=8, Write=9) | Cantonese | Hokkien

Personal Characteristics

Innovative | Handle pressure well | Fast learner, excellent analytical and problem solving skills | Pleasant interpersonal skills and self-motivated | Outgoing and enjoy meeting people | Enjoy presentation and discussion of new ideas | Love to teach and share

Extra-Curricular Activities

1. Participated in National Big App 2.0 / 33 Hours MAMPU Hackathon 2015, 9th-10th Sep 2015
2. Presenter of white papers publication at HP DS Malaysia Tech Day 2013 event at Cyberjaya, Malaysia, year 2013, 18th Sep
3. Presenter of top paper from HP DS Malaysia in HP-IT CDC Tech Day 2013 event at Shanghai, year 2013, 5th Sep
4. Demo chair for the [Semantic Technology and Knowledge Engineering](#), year 2012
5. Demo chair for the [Artificial Intelligent Demo 2011](#) co-located with the [3rd Malaysian Joint Conference on Artificial Intelligence \(MJCAI 2011\)](#) and the [3rd Semantic Technology and Knowledge Engineering Conference \(STAKE 2011\)](#) at UNITEN Putrajaya Campus, Malaysia.
6. Sponsorship chair for the [Third Malaysian Joint Conference on Artificial Intelligence](#) and [Semantic Technology and Knowledge Engineering](#), year 2011; Review committee for [Artificial Intelligent Tutorial \(AIT\)](#) 2011; Local Organization Committee for [Artificial Intelligence Workshops \(AIW\)](#) 2011.
7. Participated in the entrepreneur-training program: “[Business Plan Clinic](#)” at Mar 2009 and “[Step up Program for Entrepreneurs](#)” at Apr 2009.
8. Participated in the IPTA Research & Development Expo 2005, PWTC, 30th Sep – 2nd Oct 2005.
9. Participated in the “Closed dialogue with deputy minister of health Malaysia”, 23rd Jun 2005.
10. Participated in the 16th International Invention Innovation Industrial Design & Technology Exhibition 2005 (ITEX 2005), Kuala Lumpur, Malaysia, 19th - 21st May 2005.
11. Participated in the MSC-Technopreneur Development Seminar & Workshop, 31st May 2004.
12. Represented University Of Malaya in the ACM International Collegiate Programming Contest, Asia Region Contest held in Hong Kong in October 2000.
13. Positioned as the Marketing officer, The Grand Asia Chess Challenge 4 project, 1999/2000.
14. Others: Member, Student Library Committee, 1997/1998. Member, Sixth Form Society, 1997/1998. Participated in National Physic Competition Pre-University level, 1998. Participated in Inter-School Mathematics Quiz in the State of Penang, 1996. Adviser of Physics Department, School Science Society, 1996. Vice-Chairman, School English Language Society, 1996. Chief of Education Department, School Inventor’s Club, 1995. Head of Physic Department, School Science Society, 1995. Member, School JUDO Club, 1992-1996.

References

To be provided upon request.