



# COMPUTER SCIENCE

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# HEAD OF SCHOOL WELCOME



20<sup>th</sup> Anniversary  
Soft Launch



**Dr Amr Ahmed**  
Head of School

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Transforming lives and  
unlocking potential for  
20 years

Dear all,

Thank you for your joining the Computer Science family.

A very warm welcome to the 'School of Computer Science Newsletter'. This year, 2020, the school and the whole University of Nottingham Malaysia, are celebrating the 20th Anniversary being in Malaysia.

Amidst the Covid-19 Pandemic, everyone has worked hard to adapt to the situation. Online delivery and recorded materials help keep our students and staff safe. On the research side, we are active in submitting and contributing to grant proposals and publications.

We do our best to enrich the academic journey of our students, including extracurricular activities and exposure to industrial contacts. We offer research internships, helping to build up students' professional portfolios. Working closely with our Career Services to enhance employability of our students and connect them to potential employers.

I wish you all the best and hope to help you build a better future.

**Dr Amr Ahmed**  
Head of School of Computer Science

## New Lecturers

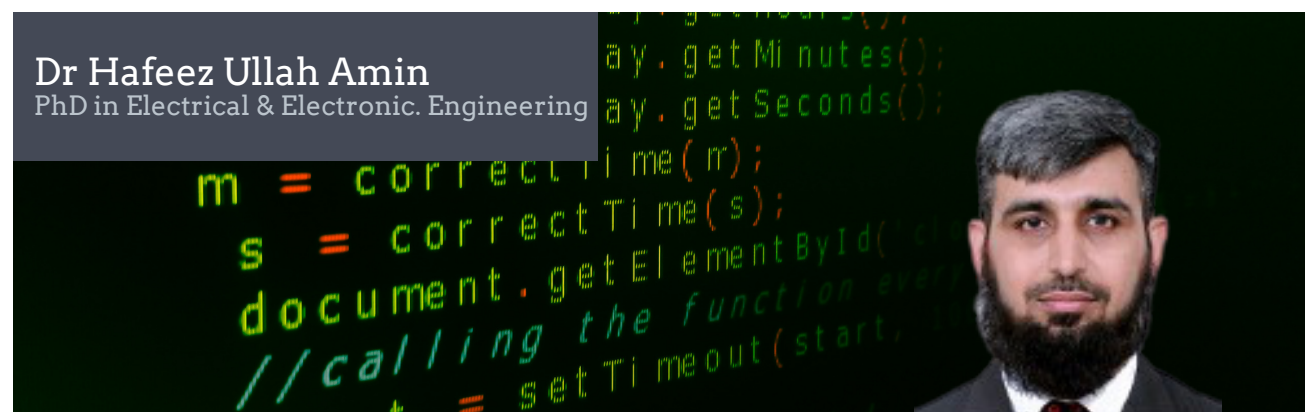
The School of Computer Science is pleased to introduce the following new lecturers



**Dr Radu Muschevici**

PhD in Computer Science

Joined as Assistant Professor. His research interests include programming languages for large-scale software variability, and software modelling for simulating and analysing complex behaviour in domains such as biology and business operations. Before joining UNMC, he was a post-doctoral researcher at Technical University of Darmstadt, Germany. He obtained his PhD in Computer Science in 2013 at KU Leuven, Belgium, MSc in Computer Science from Victoria University of Wellington, New Zealand in 2009 and BSc from Hochschule München, Germany in 2006. Prior to becoming an academic, Dr. Radu was a software engineer in the industry.



**Dr Hafeez Ullah Amin**

PhD in Electrical & Electronic Engineering

Joined as Assistant Professor in late February 2020. He had worked as a Postdoctoral researcher and Research Scientist for four years at the Centre for Intelligent Signal & Imaging Research, Universiti Teknologi PETRONAS, Malaysia. Apart from his PhD in EEE with a specialty in EEG signal processing. He has received BSc (Hons) degree in IT and MSc in CS (AI) from Pakistan in 2006 and 2009. Dr. Amin has published over 50 articles in flagship international conference proceedings. His research expertise includes analyses of Biomedical Signals including EEG, ERP, and ECG, Brain Connectivity, and Applied Machine Learning. He is also a member of IEEE, Society for Neuroscience, and a member of Malaysian Engineering and Neuroscience societies.

# CS INDUCTION WEEK

YEAR 2019



## WELCOME LUNCH

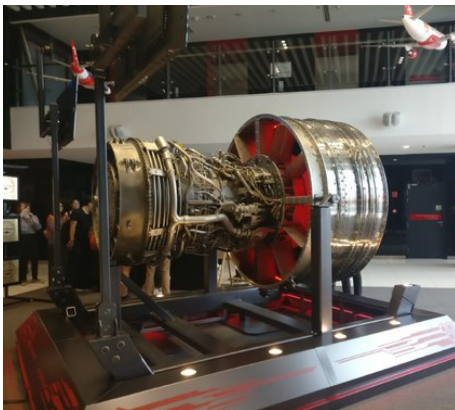
### *Welcoming the new and returning students*

The Welcome lunch session allowed our new and returning students make a great start to the new academic year.

Beginning with Dr Amr's welcome note, followed by a sneak peak of upcoming events, students of all years and lecturers gathered in this annual social event to play games eg Speech Game and mingle. Finally, everyone enjoyed some yummy lunch. During the event, our attendees were encouraged to make the most out of their learning experiences in the School of Computer Science as well as make new friends. Our seniors' speech helped fuel their passion too!



# COMPUTER SCIENCE WEEK



Last year, CS week 2019 was held between 21st to the 25th of October 2019. Interesting and exciting events were organized and open to all Computer Science Students. In order to let students experience the difference between working in a company and studying in university, field trips to AirAsia and DHL were planned. Students had fun while learning about industry trends and career opportunities. There were workshops such as Firebase Extension Workshop, Angular Workshop, Digital Forensics and P5.js for participants to increase their Computer Science related skills and knowledge. Beside all these, participants had the chance to listen to invited industry talks by Silverlake and Oracle. These invited guest talks gave students insights into the demands and opportunities in the industry and current technology trends. Last but not least, the most popular activity, Pizza and Networking were organised to allow students to meet as many people as possible to include seniors and lecturers in a short period of time and enjoy yummy pizzas afterwards. It was a week filled with wonderful and exciting activities.

# HCI DESIGN CHALLENGE 2020

HUMAN-COMPUTER INTERACTION MODULE COMP2025



## RECOUNTING MY EXPERIENCE

By Nafisa Athiya

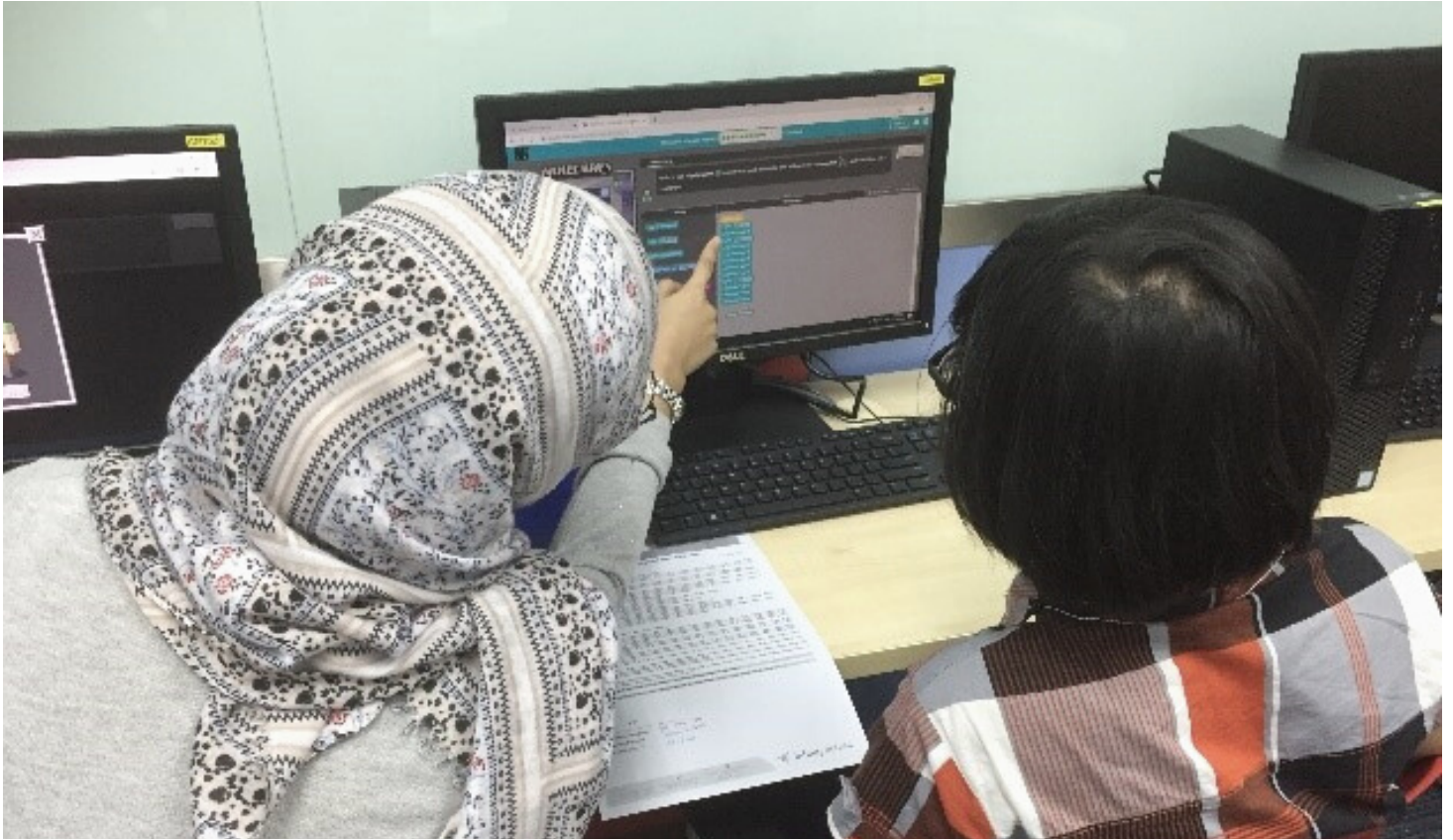
The main learning goal of the event was for students to learn and implement the design thinking process by solving a real-world challenge - preserving the Malacca's old trade using new interactive technologies. We were encouraged to understand the problem, identify requirements, brainstorm, prototype then pitch our prototype solutions. The HCI module collaborated with cultural museums in Malacca, namely the Bendahari, Baba Nyonya Heritage Museum and The Royal Press. It became apparent to us that many traditional trades and crafts are fast disappearing. So, the challenge was - What can we create to solve this problem?

Melissa Chan, founder of the Bendahari helped us to understand problems faced by cultural heritage sector. After an introduction to the Design Thinking process; a user-centred process for creative problem solving, we immediately began the ideation process. We were encouraged to share our ideas with our teammates, this process is essential as new feasible ideas were found through the discussion. Next, we had to implement our idea and build a prototype using prototyping tools such as Raspberry Pi 4 and sensors all within an hour!

The prototyping and pitching activities definitely brought me out of my comfort zone, but I believe that's exactly how we grow. The hands-on design challenge workshop was a great way to learn a module, as it allowed us to experience the design process and theories we learned by implementing them. It definitely honed my creativity, problem solving and collaboration skills which are essential for us all in the future.

# SCHOOLS EXPERIENCE

COMP3047



*"The best way to learn is to teach"*

## ORGANIZE & CONDUCT WORKSHOPS

We've conducted 14 workshops in total for students ranging from primary to university level!

## PROVIDE LEARNING OPPORTUNITIES

We've organized Virtual STEM Carnival during the MCO lockdown period!

## GAIN NEW SKILLS

From engaging with college students in Indonesia through online workshop, to producing this very newsletter!

## MY EXPERIENCE VOLUNTEERING

by Nurul Syhadah

"Not only is volunteer work gratifying, but the people I meet along the way have also taught me many useful skills. As volunteers, we have to constantly find and learn new materials to help students learn effectively, and work with other volunteers to make the workshop enjoyable. Not only that, we are also encouraged to be creative in order to come up with original ideas to make our workshops interesting and engaging."

**Are you interested in becoming an active STEM ambassador while studying?**

If you are a CS student and are interested in this module, you may contact Dr Marina Ng, the module convenor, for more information.

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# STUDENT ACHIEVEMENTS

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SCIENCE AND ENGINEERING  
PHD RESEARCH SCHOLARSHIP (SEPRS) 2019

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On the right:

**3D IOT GAME TOOLKIT BY  
MOSTAFA**

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## MOSTAFA OSAMA MOSTAFA ABDULRAZIC

Selected as the recipient of SEPRS 2019 to pursue a PhD in Computer Science. The Faculty Scholarship covers 100% tuition fee, specifically awarded to academically excellent postgraduate students in recognition of their achievements.

Mostafa's PhD title is Internet of Things (IoT) Maker Toolkit for enhancing Digital Cultural Learning. With the PhD scholarship, Mostafa is able to research on how game making and IoT technologies could be combined to create a 3D IoT game toolkit to engage the young generation in cultural learning. His research focuses on preserving and promoting awareness on cultural heritage through game making. He hopes his toolkit will be used in a classroom or museum setting in the future. "My PhD so far has been interesting, unlike anything before. It has definitely been challenging especially with the ongoing pandemic, but I'm still excited to finish what I've started."

"Do what you love, if you want to pursue a PhD about a topic you are passionate about then go for it. If there is an idea you have always wanted to pursue, go for it."





# Sony Scholarship Program 2019

Chloe San Hue Teng



Chloe San Hue Tung is a scholar for the Sony Scholarship Program 2019. Only one scholar is selected each year by Sony under Computer Science! She decided to try her luck after got to know about this program from the University's scholarship email. The process starts with mailing the application form to Sony.

After being shortlisted, Chloe was required to attend an aptitude test consisting of 3 sections – Diagrammatic (IQ Test), Verbal (English Understanding) and Data Interpreting (Statistics and Math). Chloe was called for an interview two weeks after the tests. "I was on cloud nine when I received a phone call from Sony congratulating me on securing the scholarship as this sum of money would covers a portion of my tuition fees." said Chloe. She mentioned that it's a progressive increase in knowledge throughout her learning journey in UNM. According to Chloe, Year 1 knowledge is essential in building her foundation as a CS student and to keep up with deeper harder subjects in year 2 and 3.

## School of Computer Science Postgraduate Conference Fund Competition 2020

- First Prize (RM5000) Winner: Mr Lim Wei Xiang
- Second Prize (RM3000) Winner: Mr Mahmoud Abdelazim Helmy Mahmoud Khattab
- Third Prize (RM2000) Winner: Mr Le Dinh Van Khoa

## Best FYP Award 2019/2020

**SOON YU HONG**

Abstract: The Round Robin scheduling algorithm is designed to provide every process a fair share of the CPU processing time according to a fixed time quantum. The benchmarking algorithm has proven to be effective when used with the standardized test sets, but loses its efficacy with other sets of processes. The comparisons between different algorithms have also proven that a majority of the currently proposed algorithms contain major flaws that hinder their performances.

## Dean's Excellence Scholarship 2019

**Y1:**

- |                    |                |
|--------------------|----------------|
| Pua Li Xue         | Cheok Jun Yang |
| Goh Xin Yee        | Soh Kai Xuan   |
| Erin Soraya Ruslan | Grigoriy Kirpa |
| Yong Zi Li         | Lee Hui Fang   |
| Chew Boon Zhan     | Lee Kin Yip    |
| Lim Xin Jieh       | Teo Shi Bin    |

**Y2:**

- |                          |                       |
|--------------------------|-----------------------|
| Tan Song Ning            | Ooi Kai Sheng         |
| Dominic Alphonsus Dorhat | Soo Khye Shen Brandon |
| Lee Ka Shing             |                       |
| Goh Ee Fey               |                       |
| Lim Wei Han              |                       |

# First Place Award

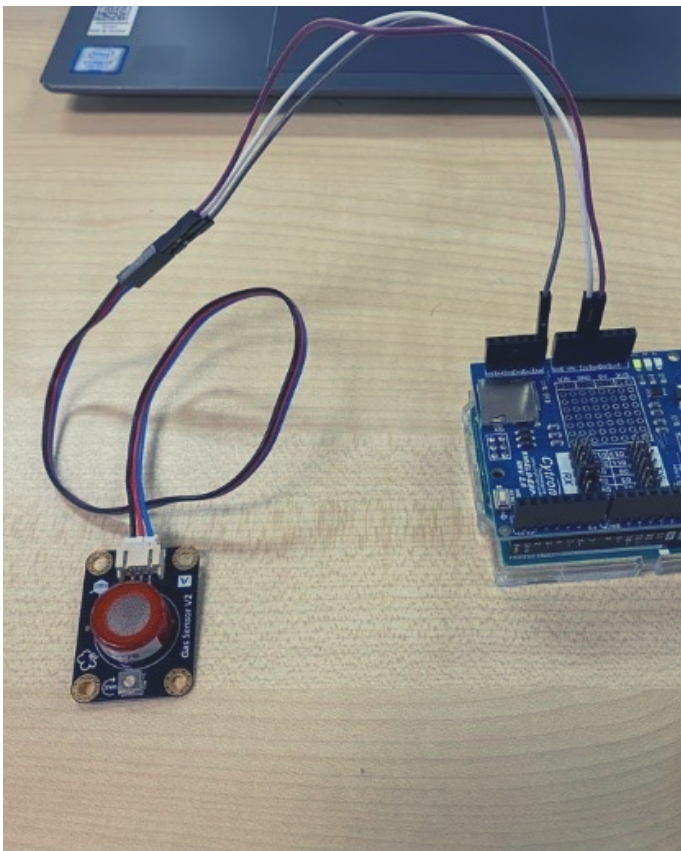
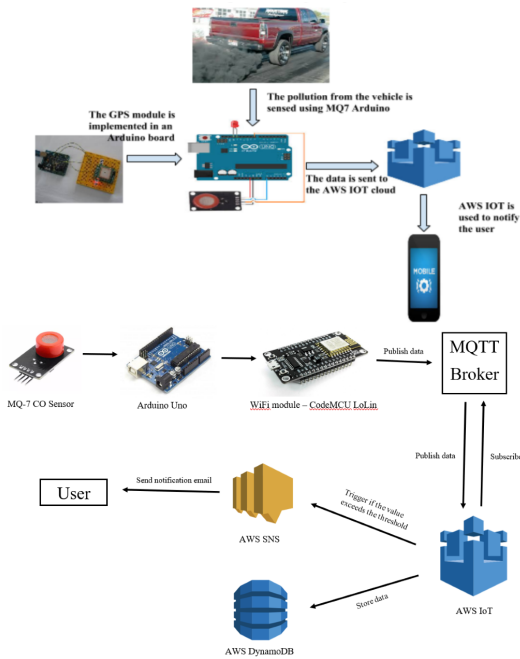
## IoT based Car Pollution detection using Cloud Computing

Group 6b - Chong Jia Wei

- Lee Dong Jun
- Shruti Shrabana Biswas
- Vaseem Ameena
- Aly Muhammad Alaa Aly Attia

The aim of their project was **developing a system that aids in the preservation of a future which is much better and safer.**

The device detects the gas emission (specifically carbon monoxide) from the car exhaust. Once CO level from car exhaust detected by the system exceeds a certain threshold, the user is notified along with suggestions on how to reduce CO emission. "I believe we have won the first place due to the potential our device has in curbing air pollution by making users more conscious of their carbon footprint. This will, in turn, affect the health, lifestyle, and future of the society." said Ameena. They have shared some advice to future SE students which is, to choose a project which they personally find interesting and are eager to work on, and focus on establishing the connections between components rather than finish individual components first and try to connect them later.



*"Curbing air pollution by making users aware of their carbon footprint"*

# Second Place Award

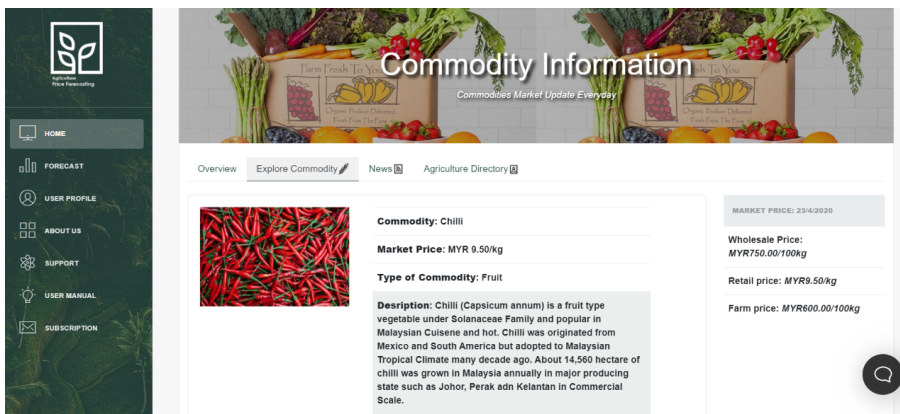
## Long Short-Term Memory Model Based Agriculture Commodity Price Prediction Application

Group 6a - Liew Xin Yu

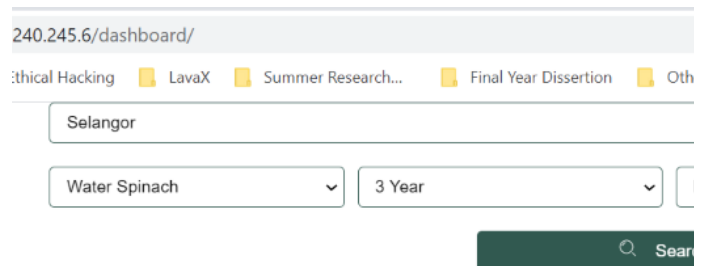
- Lim Kelly
- Chung Nicole Ka Hei
- Sin Kai Ling
- Goh Howe Seng

The aim of their project was to **develop an agriculture commodity price prediction system to achieve a sustainable future.**

They believed that cooperation between teammates and continuous hard-work contributed a lot to their success. SE students are advised to keep good interactions among teammates and always learn together throughout the development process. It is far from enough to just submitting individual tasks.



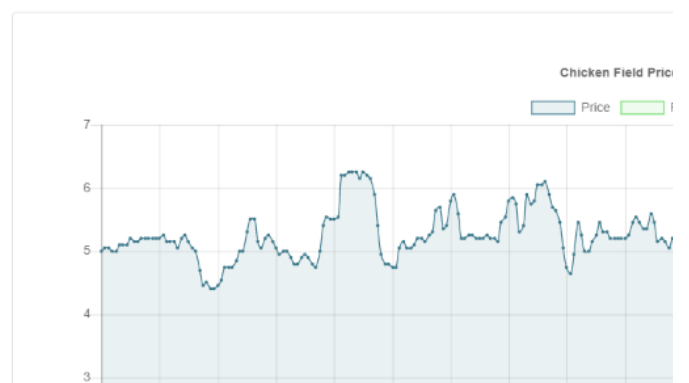
*"aiding in the preservation of a sustainable future"*



### Chicken

Current Price (2020-03-30): **RM5.09** Price change 8.30%

Forecast Price For Next Week (2020-04-06): **RM5.09** Price change 0.00%

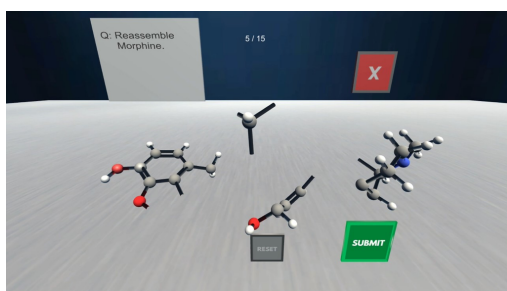
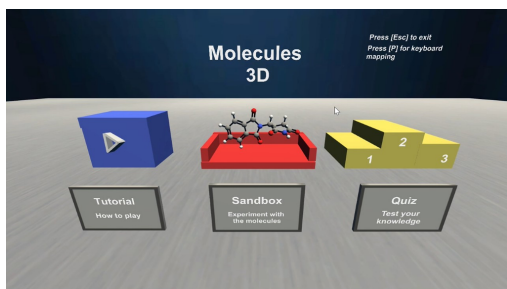


# Third Place Award

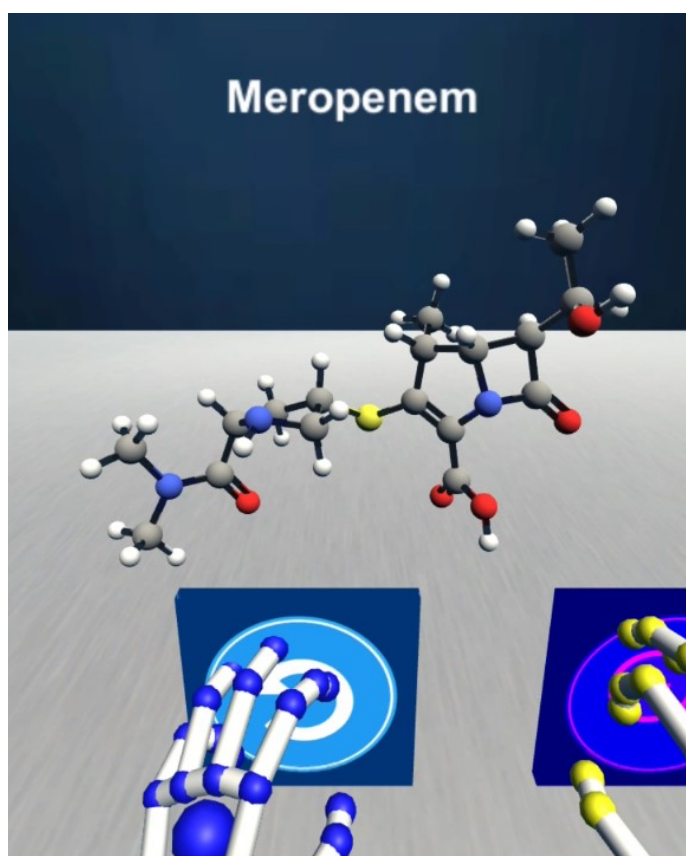
## Gesture Tracking Technology for Education

Group 7b - Chong Jia Wei  
- Yap Jun Kiat  
- Wong Kah Yan  
- Lim Ke Xin  
- Lim Wei Han

This project focuses on helping students learn **stereochemistry** (a study on the different arrangements of a molecule) by **introducing interactive learning into classrooms and labs in UNM to improve the learning experience for pharmaceutical students.**



They achieved this by designing a software that encourages a hands-on method of teaching and learning by utilising interactive tools such as Leap Motion sensors. By doing so, the teaching and learning capabilities will improve as lecturers have a new way to illustrate complex concepts. They believe how beneficial their software can potentially be for their client led to their success. Throughout this project, they got the chance to use software development tools such as Unity to design and implement their software, which they would not be able to for other coursework and classes. They advice future SE students to be clear about your job scope and group's capabilities when negotiating with clients throughout the project cycle.



*"Introducing interactive learning into classrooms and labs in UNM to improve the learning experience for pharmaceutical students"*

# Internship Experience in 2020

## Industry Experience

### KELLY LIM

"Hi everyone, I am a final year student in Computer Science. During my summer break, I had taken an internship opportunity offered by a startup company. Throughout my internship, I had the opportunity to learn technical skills such as building websites and mobile applications. I also get to practice what was taught in the university. This experience was very pleasant as it not only broadened my knowledge, it also assisted me while I prepare for my final year project. If you have a chance in getting an internship, do not worry or hesitate, grab that opportunity and perform well."



### NG KAH KIT

"Serving as an intern in HT Consulting Asia has been an immersive and invaluable experience. I was blessed with the opportunity to undergo different software development phases where I was involved in designing software applications and integrating modern technologies to replace legacy software. This has helped me apply theoretical classroom understanding into creating practical real-world solutions."

# Internship Experience in 2020

## School UG Summer Internship

### TZE EE

"The summer internship was a great experience for me, as I learnt a lot from it. Not only have I gained experience in conducting formal academic research, I also managed to familiarise myself with designing, implementing, training, and testing neural networks, which otherwise I would not have been able to do in courseworks."

### SONIA MUBASHER

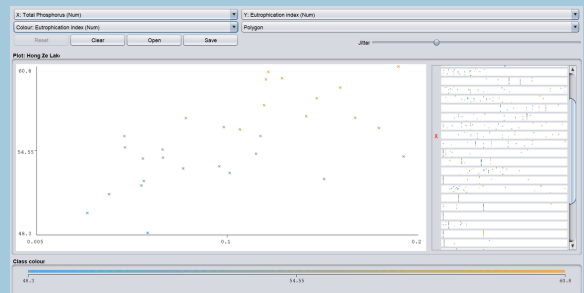
"My project title was "Adaptive Learning Management System" under supervision of Mr. KR Selvaraj to provide a customised learning path to students according to their needs. The prototype of the project was created using Java and deployed on Amazon web server. Data was collected from 2nd year students to test the usability and effectiveness of the system. I am now in my final year and will be continuing my research in this area. My overall experience was really good as enough help and support was provided from my supervisor and I got to learn some new tools and techniques which will be really helpful in my studies."

### SHRABANA BISWAS SHRUTI

"An internship is one of the key experiences recommended during your time as an undergraduate. That's why during the summer, after my second year at UNM, I choose to do a summer internship. I developed an adaptive educational hypermedia courseware under the supervision of Mr. KR Selvaraj. I had to deploy a prototype of Adaptive learning system which I previously developed to AWS, gather feedback from the users and improvise the system according to that. It had been a great experience and I've learnt a lot through this project which would assist me in my final year and beyond that."

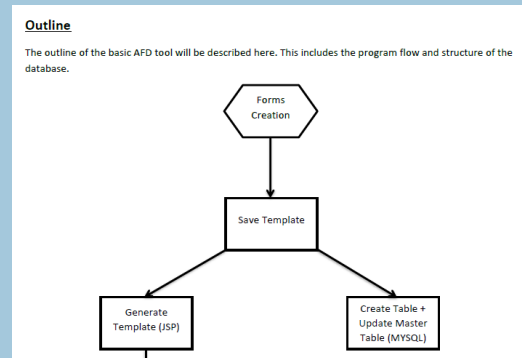
### SIN KAI LING

"This year, my internship experience was an interesting and special one. Instead of going to office, I worked remotely with no physical meeting with my lecturer. Throughout the internship, I learned a lot of new knowledge on data mining and hands-on experience using data mining applications. Beside that, surprisingly, one of my works was published and I got a chance to attend the conference. I have met with other professionals from all over the world and sharing knowledge in various areas. This is indeed a precious experience of me throughout the summer break and pandemic in 2020."



### NG KAH KIT

"My research internship with the School of Computer Science under the supervision of Dr. Tomas Maul has been invaluable as it opens an entirely new door of approach towards computing problems that we do not normally learn from undergraduate taught modules. Additionally, this internship has given me insights on the research pathway in the field of Computer Science through the different analysis and understanding of unsolved research problems."





Soon Yu Hung  
 Leong Kar Wey  
 Chee Jia Hong  
 Chen Wen Kang  
 Brendan Lum  
 Chhaya Priyanka Jahul  
 Lee Yan See  
 Wong Zi Chin  
 Fara Eliana Zawawi  
 Logan Chandrasegaran  
 Jovi Chow Chu Qi  
 Ferdous Hossain Fahim  
 Lieu Kin Kit  
 Tey Kai Wen  
 Lobna Ahmed SannyEIBaha a Talat  
 Muhammad Alif Danial Sahidon  
 Lin Qun Jie

# VIRTUAL GRADUATION

*Class of 2020*

The Class of 2020 graduated in extraordinary circumstances with a virtual celebration. To mark this special day, the School of Computer Science planned a day of celebration by bringing our exceptional Class of 2020 together virtually on 24 July 2020. The celebration started with a graduation speech by the Head of School, Dr. Amr Ahmed, followed by a sharing of recorded messages – praises and words of wisdom from lecturers, and videos and photos of the students' learning journey at the School of Computer Science.

A virtual degree roll call was made to signify students' achievement in receiving their degree certificate on this special day. Our Class of 2020 graduates were asked to reflect upon their Nottingham experience in 3 words. They left us with a summary of their experiences, visualized in the form of a word art. Congratulations, Class of 2020!



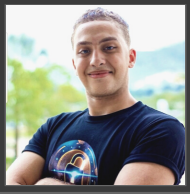
Congratulations to our postgraduate students who graduated with PhD in Computer Science:

Dr Huang Hai  
 Dr Sheena Leeze Verghese

Congratulations to our lecturers for completing their Postgraduate Certificate in Higher Education (PGCHE):

Dr Iman Liao  
 Dr Marina Ng  
 Dr Siew Chin Neoh





# Yousef Mobrahim Ebrahim

## Student Representative

During my years here in UNM, I've involved myself in various events, workshops, and training which showed me how conscientious and professional the atmosphere is. My love and passion over computer science have grown vastly as I find the process of software development marvelous; at how we can create something that is able to mimic the brain function and provide results similar to human consciousness.

A very crucial experience I obtained was through the process of being a representative for around 350 students in the school, something which I am proud of. Working with students, hearing their concerns and voicing it out to help enhance their student experiences boosted my leadership skills immensely. Working closely with lecturers and the education network to provide students all their needs brought me joy and serenity.

"Do not ever think twice about doing anything you feel like trying during the university time. The experiences you gather will make you a much more powerful, influential, and inspiring person."

# Lim Zhen Wen

## Computer Science Society Representative



As a student and working under different societies and organizations, I would say that my uni life is fantastic. I started as a Junior Committee in foundation then the event manager in first year. Now, I am the president of this society. Sometimes, I do feel stressed and tired while planning events, doing documentation and all sort of things for the society.

Being a member of a society is fun but being in a committee is a challenge. You will be hosting workshops, competitions and events for your course mates, juniors and seniors and anyone you know. I like the feeling of achievement, the feeling of working with amazing people, and the feeling of seeing everything you have done. I can never complete all these projects and plans without my friends' help.

"I don't regret being in a committee under any society, especially for the Computer Science Society."

JOIN US





# ALUMNI HIGHLIGHTS

BY FATIMA TAYEB

Fatima Tayeb is a recent graduate in the summer of 2020. During her time here, she's been involved in various activities, like being representative of the School and being a co-lecturer in the Nottingham Advantage Award module "Present2Represnt", as well as leading the BlueSky initiative of organizing classes and managing volunteers to tutor refugee school kids. She is a recipient of the Dean's Excellence Award, Google Anita Borg-Women Techmaker- APAC 2018 Scholarship and recently the prestigious Vice-Chancellor Medal 2020. She is now working as a Data Science Intern, working on unlocking the potential of Machine Learning and Artificial Intelligence to enhance property services.

## STEPS TO SUCCESS

### 1 - PUTTING IN THE EFFORT

Just attending your lectures and submitting assignments on time may be enough for a passing grade, but if you really want to excel, you have to commit more time and effort into understanding everything. This means reading textbooks, making notes, asking questions, watching videos, and putting your knowledge into practice.

### 3 NETWORKING

While there is truth to the clichéd image of tech students being socially awkward, good communication skills are essential for a Computer Scientist. You'll need them for any social interactions, whether it be with your groupmates, your colleagues, or even your 5-year old sibling when they ask you what those letters and numbers on your screen are. A great way to develop these skills is attending social events and getting involved on campus.

### 5 - STAY CURIOUS

Do not expect to be "spoon-fed" concepts in class. Learn to ask questions relentlessly and think deeply about matters. Realize how what you learn fits into the big picture. Having this mindset opens up new worlds and possibilities and can make you a successful student.

On a final note, know that the road ahead will be challenging and there will be times when you will doubt yourself and your choice, but knowing why you are on this journey and where you are going will help you persevere.

### 2 - PROJECTS ON THE SIDE

Don't wait until you graduate or land a job to put your skills into use. You could write a script to automate your tasks, build a personal website, make an app for your local vet to help manage booking appointments or create a fun game! Your projects may not be great at first, but the key point is commitment! With each attempt, you'll get better and better.

### 4 - DONT WORRY TOO MUCH ABOUT GRADES

Don't sacrifice your health and sanity just to get distinctions. It doesn't mean that you should ignore your studies altogether, but don't make getting high grades your only aim. . Learn from your mistakes and move on. You are not defined by your grades. Your skills and experiences matter more than getting straight A's. Do your best and enjoy the learning process.

"I cannot believe that for once a new academic year is starting and I don't have to worry about 'first day of uni blues'. To all the freshers reading this, fret not, I have been there before and understand this mixed feeling of excitement and anxiety about going into a big chapter of your life as a university student. This 3 year journey you are about to embark on is an important one and will help form your path forward in life, to help you make the most of it, here are 5 pieces of advice that I wish someone told me when I started out as a fresher three years ago."

**"A  
SMOOTH SEA NEVER  
MADE A SKILLFUL  
SAILOR"**

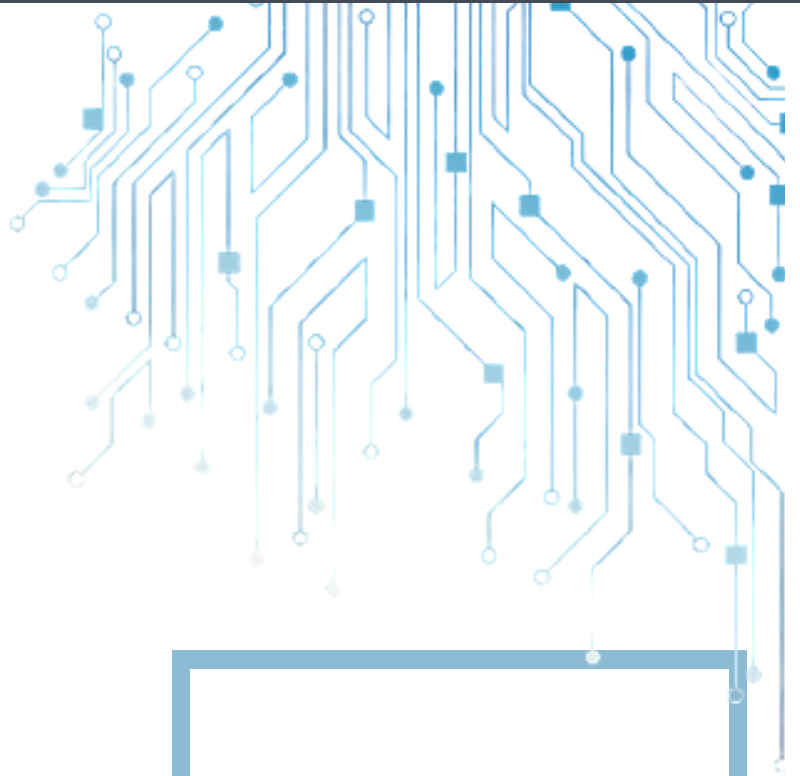
**- FRANKLIN D.  
ROOSEVELT**

*P.S: Connect with me on LinkedIn and feel free to reach out to me for more advice and resources to help you with your university experience.*



# RESEARCH HIGHLIGHTS

Highlighting some research achievements of our lecturers who are also active researchers and experts in various CS fields



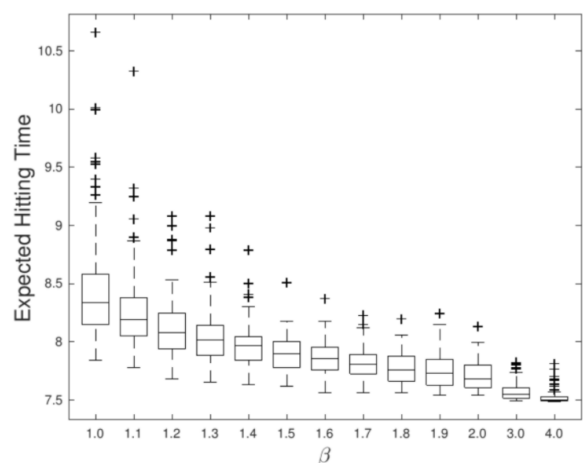
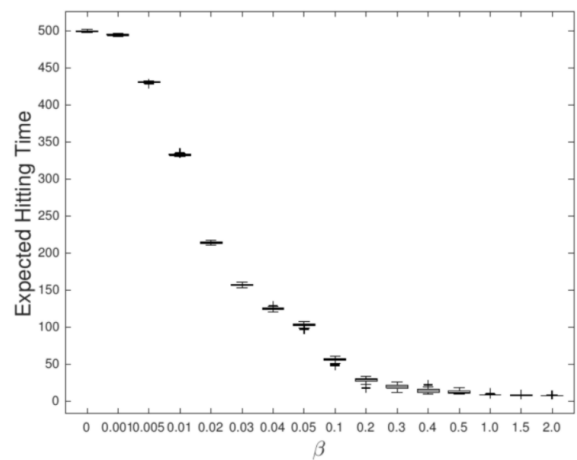
**BELOW**  
Graph Representation

## A NEW FRAMEWORK FOR ANALYSIS OF COEVOLUTIONARY SYSTEMS

*Dr Chong Siang-Yew*

**S. Y. Chong**, P. Tino, J. He and X. Yao, "A New Framework for Analysis of Coevolutionary Systems - Directed Graph Representation and Random Walks," *Evolutionary Computation*, Vol. 27, No. 2, pp. 195-228, 2019.

Summary: Studying coevolutionary systems in the context of simplified models remains an open challenge since the rich underlying structures associated with pairwise-comparison-based fitness measures are often not taken fully into account. The paper develops a new framework to address this issue. At the core of the approach is the directed graph (digraph) representation of coevolutionary problems that fully captures structures in the relations between candidate solutions.



# ECONOMIC FEASIBILITY ASSESSMENT FRAMEWORK FOR UNDERUTILISED CROPS

Dr ZhiYuan Chen

MEI SHINOH, **ZHIYUAN CHEN**, EBRAHIM JAHANSHIRI, DINO ISA and YEE WAN WONG, 2020. An economic feasibility assessment framework for underutilised crops using Support Vector Machine. Computers and Electronics in Agriculture. 168, 105116.

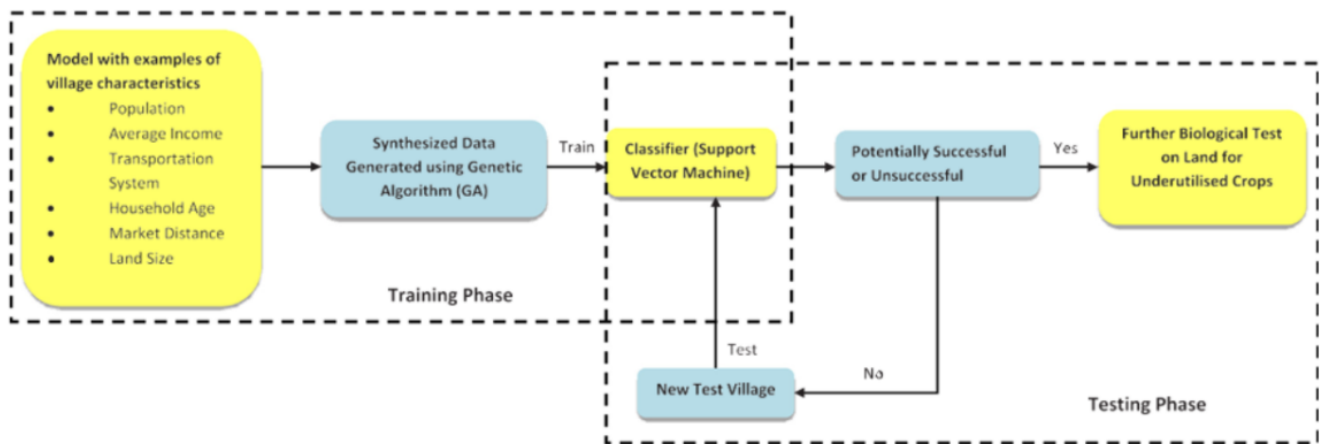
Summary: This project aims to assess the commercialisation possibility of underutilised crops on a large scale for under-developed areas with currently no possibility of growing commercial crops probably due to climate, soil characteristics. Support Vector Machine (SVM) method was implemented in conjunction with Genetic Algorithm (GA) and associated fitness functions to generate training data from approximate models which was developed for normal cash crops, with results showing accurate classifications are obtainable.

# MULTI-SENSORS IN-LINE INSPECTION ROBOT FOR PIPE FLAWS

Dr Zhiyuan Chen

DINH VAN-KHOA LE, **ZHIYUAN CHEN** and RAJPRASAD RAJKUMAR, 2020. Multi-sensors in-line inspection robot for pipe flaws detection IET Science, Measurement & Technology. 14(1), 71-82.

Summary: The major problem in the detection of flaws in buried concrete pipes is the difficulty in modelling the detection of cracks as a result of its irregularity and randomness that cannot be easily detected. This work covers the study of defect detection of non-destructive testing methods using fusion inspect sensors, light detection and ranging, and optic sensors. In-line inspection (ILI) robots were reviewed and a prototype designed and successfully operated in a lab-scale environment. The study on current support vector machine (SVM) technique is centred as the main classification engine for the combined sensory data. The experiments with SVM techniques to evaluate the feasibility of defects detection also achieved remarkable results.



# EVALUATION OF SIMILARITY MEASURES FOR VIDEO RETRIEVAL

*Dr Amr Ahmed*

Bekhet, S., **Ahmed**, A. Evaluation of similarity measures for video retrieval. *Multimed Tools Appl* 79, 6265–6278 (2020). <https://doi.org/10.1007/s11042-019-08539-4>

**Summary:** This paper presents an extensive analysis regarding the most commonly used video retrieval similarity measures. The results are consolidated with a multifaceted analysis, i.e. multiple challenging video datasets, retrieval curves and confusion matrices. The major contribution of this paper is investigating the effectiveness of the common similarity measures from a video retrieval perspective. This would give the field researchers the required knowledge to select the most suitable distance measure for their video retrieval research work



**QR CODE**

*Website of Article*



## IEEE GOLD BEST PAPER AWARD IN IVIC'19

*Dr Marina Ng*

A team of multidisciplinary researchers led by Dr Marina Ng from the School of Computer Science, involving Dr Marieke De Vries and Dr Jessica Price from the School of Psychology and final year project students Cheng Yee Yap (Computer Science), Yungen Cheah and Suk Yee Lim (Psychology) won the IEEE Gold Best Paper Award in the 6th International Visual Informatics Conference (IVIC) 2019 held in Bangi Resort Hotel between 19 - 21 Nov 2019. The joint research collaboration between the two schools through final year project supervisions resulted in the winning paper titled: "App4Autism: An Integrated Assistive Technology with Heart Rate Monitoring for Children with Autism". The paper contributes to better understanding the potential use and incorporation of music listening and heart rate/anxiety level monitoring through the App4Autism app.

# Learning Resources for Machine Learning

## AI FOR EVERYONE

Terminologies, workflow of projects, case study of application



## MACHINE LEARNING

fundamental concepts of Machine Learning



## DEEP LEARNING

Recent overview on research and developments



## DEEP LEARNING

Neural Networks and Deep Learning



## DEEP LEARNING

Improving Deep Neural Networks



## NEURAL NETWORKS

Understand how deep learning works



## COURSERA

Deep Learning Course with Certification



## KAGGLE

Tutorial courses to get started



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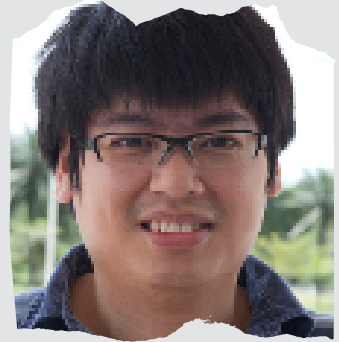
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### Editors

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- Michael Thong

### Advisor

- Dr Marina Ng



#UNM20years

## Course Updates

### New to September 2021 intake:

BSc (Hons) Data Science

The school is collaborating with the School of Math, and introducing a new academic program (degree); Bachelor of Science (with Honours) Data Science. Recent developments in automated systems and data gathering have meant that 'big data' is becoming increasingly common. The programme will produce graduates with the core mathematical and computer science knowledge and skills needed to present, analyse and ultimately understand large data sets.

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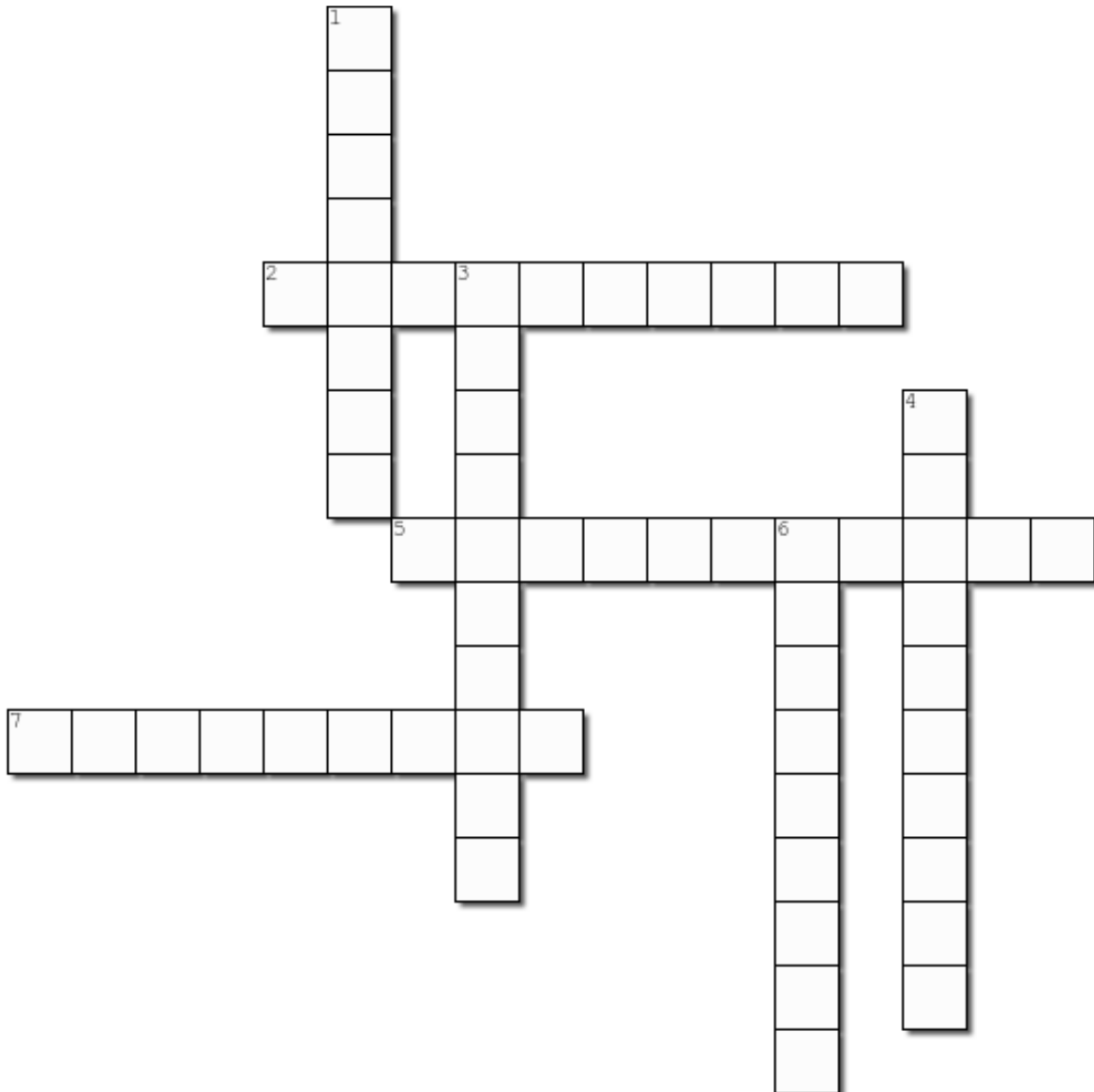
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W e b s i t e



<https://www.nottingham.edu.my/ComputerScience>

# CROSSWORD PUZZLE



**Across**

- 2. the practice or science of collecting and analysing numerical data in large quantities, especially for the purpose of inferri
- 5. facts provided or learned about something or someone.
- 7. the repetition of a process.

**Down**

- 1. the answer to a problem.
- 3. the application of scientific knowledge for practical purposes, especially in industry.
- 4. set to the value or put in the condition appropriate to the start of an operation.
- 6. a process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.