

**NTU Summer Programme 2019 – Machine Intelligence and Applications  
8 to 19 July 2019**

**Venue: NTU – Learning Hub North, The Arc, Tutorial Room +47 (LHN-02-13)**

**Programme Schedule**

<b>Date/Day</b>	<b>Time</b>	<b>Programme</b>
7 Jul 2019 Sunday	16:50	Arrival at Singapore Changi International Airport (CZ3039) Check-in to <b>NTU Hall of Residence 16, 50 Nanyang Walk, Singapore 639929</b>
8 Jul 2019 Monday	09:00 – 09:45  10:00 – 12:00  12:00 – 13:00  13:00 – 17:00	<b>Welcome Session &amp; Programme Briefing</b>  <b>Lecture 1: Machine Intelligence and Data Analytics</b> <ul style="list-style-type: none"> <li>- Introduction</li> <li>- What is AI, Machine Intelligence, Data Analytics</li> <li>- Supervised vs. Unsupervised machine Learning Techniques</li> <li>- Tools used for Machine Learning</li> <li>- Pre requisite for Machine Learning</li> </ul> <i>(by Dr Kwoh Chee Keong)</i>  <b>Welcome Lunch hosted by PaCE@NTU</b>  <b>Ice breaking games, Campus &amp; Neighbourhood tour</b> <i>(by NTU students)</i>
9 Jul 2019 Tuesday	09:00 – 11:30  13:00 – 15:30  15:30 – 16:30	<b>Lecture 2: Machine Intelligence and Data Analytics</b> <ul style="list-style-type: none"> <li>- Understanding Data, Data Cube, Big Data</li> <li>- Preliminary exploration, Visualization and its characteristics</li> </ul> <i>(by Dr Kwoh Chee Keong)</i>  <b>Lecture 3: Machine Intelligence and Data Analytics</b> <ul style="list-style-type: none"> <li>- Decision Tree</li> <li>- Rule-Based Classifier</li> </ul> <i>(by Dr Kwoh Chee Keong)</i>  <b>Visit Computational Intelligence Lab (CIL) and Biomedical Informatics Lab (BIL)</b> <i>(by Dr Kwoh Chee Keong)</i>

PDate/Day	Time	Programme
10 Jul 2019 Wednesday	09:00 – 11:30	<p><b>Lecture 4:</b>  <b>Machine Intelligence and Data Analytics</b></p> <ul style="list-style-type: none"> <li>- Bayesian Classifiers (Naïve Bayes Classifier)</li> <li>- KNN and K-means Clustering</li> </ul> <p><i>(by Dr Kwoh Chee Keong)</i></p> <p><b>Self-study</b></p>
11 Jul 2019 Thursday	09:00 – 11:30  13:00 – 15:30  15:30 – 16:15	<p><b>Lecture 5:</b>  <b>Machine Intelligence and Data Analytics</b></p> <ul style="list-style-type: none"> <li>- Support Vector Machines (SVM)</li> </ul> <p><i>(by Dr Kwoh Chee Keong)</i></p> <p><b>Lecture 6:</b>  <b>Machine Intelligence and Data Analytics</b></p> <ul style="list-style-type: none"> <li>- Artificial Neural Networks (ANN) and Backpropagation</li> <li>- Deep Learning</li> <li>- Ensemble Classifiers</li> </ul> <p><i>(by Dr Kwoh Chee Keong)</i></p> <p><b>Visit Robotic Research Centre (RRC)</b>  <i>(by Dr Kwoh Chee Keong)</i></p>
12 Jul 2019 Friday	09:00 – 11:30  13:00 – 15:30	<p><b>Lecture 7:</b>  <b>Intelligent Machine Vision</b></p> <ul style="list-style-type: none"> <li>- Introduction of Intelligent Machine Vision</li> <li>- Introduction to the human vision system</li> <li>- Introduction to the computer vision systems</li> <li>- Bio-inspired intelligent computer vision</li> </ul> <p><i>(by Dr Lu Shijian)</i></p> <p><b>Lecture 8:</b>  <b>Intelligent Machine Vision</b>  <b>Image Synthesis in Machine Vision:</b></p> <ul style="list-style-type: none"> <li>- Image Collection and Annotation in Deep Learning based Vision Systems</li> <li>- Composition based Image Synthesis</li> <li>- Transfer based Image Synthesis</li> </ul> <p><i>(by Dr Lu Shijian)</i></p>
13 Jul 2019 Saturday	08:30	<p><b>One way transfer provided to VivoCity</b> <i>(Free &amp; Easy)</i>  Meet at Hall of Residence 16 and board coach to VivoCity Shopping Mall <i>(for access into Sentosa Island from 3rd level of VivoCity Shopping Mall via Sentosa Express Monorail)</i></p>
14 Jul 2019 Sunday		<p><b>Free</b></p>



Date/Day	Time	Programme
18 Jul 2019 Thursday	09:00 – 11:30          13:00 – 15:30	<p><b>Lecture 14:</b>  <b>Human Computer Interaction</b></p> <ul style="list-style-type: none"> <li>- Guidelines – narrowly (specific) focused rules</li> <li>- Principles – widely applicable and enduring</li> <li>- Theories – tested, proven, broadly useful</li> <li>- Evaluating user interfaces</li> </ul> <p><i>(by Dr Owen Noel Newton Fernando)</i></p> <p><b>Lecture 15:</b>  <b>Human Computer Interaction</b></p> <ul style="list-style-type: none"> <li>- Ethnographic observation and participatory design</li> <li>- Design a low fidelity (lo-fi) prototypes</li> <li>- Share lo-fi prototypes among each other to receive written critiques</li> <li>- Resolving lo-fi prototypes into hi-fi prototypes</li> </ul> <p><i>(by Dr Owen Noel Newton Fernando)</i></p>
19 Jul 2019 Friday	09:30 – 10:00  10:00 – 12:00    13:30 – 14:15   14:30 – 15:30	<p><b>Group Presentation Preparation</b></p> <p><b>Group Presentation</b>  <i>(Facilitator: Dr Kwoh Chee Keong)</i></p> <p><b>Assessment</b></p> <p><b>Certificate Presentation Ceremony</b>  <i>(by Dr Kwoh Chee Keong)</i></p> <p><b>Group Photo-taking</b></p>
20 Jul 2019 Saturday	05:30	<p>Check-out from NTU Hall of Residence 16,  50 Nanyang Walk, Singapore 639929</p> <p><b>Departure to Singapore Changi International Airport (CZ352)</b></p>

*\*Programme schedule may subject to change.*