**Agenda:**

**Day 1 – Deep Learning & Image Processing**

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| **Time** | **Topic** |
| 8:30 AM | Breakfast & Registration |
| 9:00-9:45 AM | Session: Introduction to Neural Networks  (45 min) |
| 9:45–10:30 AM | Lab: Setup (DSVM, anaconda environment) |
| 10:30-10:45 AM | Break |
| 10:45-11:15 AM | Intro to Keras Library |
| 11:15-12:00 PM | Lab: Keras – simple image classification on mnist dataset |
| 12:00-1:00 PM | Lunch break |
| 1:00-1:45 PM | Session: Introduction to Deep Neural Networks (includes Convolutional Networks) |
| 1:45 – 2:15 PM | Lab: Keras – CNNs for image classification on fashion mnist dataset |
| 2:15-2:30 PM | Break |
| 2:30-3:30 PM | Application: Visual Search (with Demo) |
| 3:30-4:30 PM | Cognitive Services for image/vision (with optional lab) |
| 4:30-5:00 PM | Conclusion – Q&A |

**Day 2 – Deep Learning & Natural Language Processing (NLP)**

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| **Time** | **Topic** |
| 8:30 AM | Breakfast & Registration |
| 9:00-9:45 AM | Session: Introduction to Recurrent Neural Networks |
| 9:45-10:30 AM | Lab: Character models with char-rnn |
| 10:30-10:45 AM | Break |
| 10:45-11:30 AM | Session: Word Embeddings |
| 11:30-12:15 PM | Lab: LSTM with Keras - sentiment analysis on imdb movie reviews |
| 12:15-1:15 PM | Lunch Break |
| 1:15-2:15 PM | Session: Introduction to auto-encoders |
| 2:15-3:15 PM | Application: Document retrieval with auto-encoders (with demo) |
| 3:15-3:30 PM | Break |
| 3:30-4:30 PM | Cognitive services for NLP (with optional lab) |
| 4:30-5:00 PM | Conclusion -  Q&A |

*\*Topics & times subject to change*