Department of COMPUTER SCIENCE
THE UNIVERSITY OF TEXAS AT DALLAS

invites you to attend

Artificial Intelligence Conference

Saturday May 19, 2018 @ SLC building, UT Dallas

8-8:30am	Registration & Breakfast
8:30-12	AI/Machine Learning Workshops
12-12:30	Registration & Lunch & Networking
12:30-5:40	Technical Talks by Several Prominent Speakers in industry and academia
5:40-6:30pm	Networking with speakers & industry folks

Details: aisutd.org/conf

Register by May 15: bit.ly/csconfutd

($25 late fee starts on May 16)

Registration Fee	*Workshops*	*Technical Talks*	*Whole Day*
Professionals	$60	$60	$100

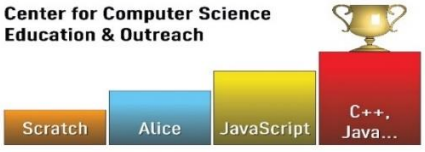
College students, faculty & staff: $10

Advanced high school students (with registered adult): $25

Questions? contact@aisutd.org

Artificial Intelligence Society

Center for Computer Science Education & Outreach



Agenda for Artificial Intelligence Conference

Saturday, May 19, 2018 @ UT Dallas

Hands-on Workshops

8am - 8:30	***Registration & Breakfast (Foyer area)***
8:30-9:30 9:40-10:40 10:50-12	*Track #1:* Three one-hour workshops by AIS – SLC 1.102 Intro to Natural Language Processing: Sentiment Analysis of Reviews - Amol Mavuduru Training Neural Nets with Microsoft Azure - John Laroche Introduction to Deep Learning for Computer Vision - Ram Narayan Lakshmanan
8:30 – 12	*Track #2:* Data Science Visualization Techniques – Tarry Singh, founder & AI Neuroscience Researcher @ deepkapha.ai – SLC 2.303

Technical Talks

11:45-12:25	Registration & Lunch & Networking	
12:30-12:35	Welcome by Dr. Gopal Gupta, CS Department head – SLC 1.102	
12:35 - 1:20	Deep Learning for the masses, Tarry Singh, founder & AI Neuroscience Researcher @ deepkapha.ai	
	SLC 1.102	SLC 2.303
1:25 – 2:10	AI Technology Stack - An overview of tools & technologies for AI practitioners, Babar Bhatti, Quantum Grid Labs	The spectrum of Intelligent Automation – RPA to AI, Mike Courtney, KPMG
2:15 – 3	AI frontiers in Oil and Gas, Vikram Jayaram, Pioneer Natural Resources Company	Coding Computer Vision Model in 45 minutes - Deep Learning on GPUs, Pablo Marin, Microsoft
3 – 3:15	*Tea Break & Networking*	
3:15 – 4	Scaling Deep Learning AI beyond experimentation to deployment at scale, Mandeep Kumar, deepcognition.ai	Practical Applications of AI - Case Studies from Customer Service, Sales and Marketing, Babar Bhatti, Quantum Grid Labs
4:05 – 4:50	AI Application in providing reverse logistics solutions and InsurTech on Mobile Devices, Chintan Shah, HYLA mobile	Automating Disease Management Using Answer Set Programming: Heart Failure, Dr. Zhou Chen, UT Dallas
4:55 – 5:40	The philosophy and mechanics of intelligence, Robert Nally	AI in NLP & notes from *Train AI conference @ SFO*, Dr. Karen Mazdi, UT Dallas
5:40 – 6:30	*Snacks & Networking (Outside area between SLC and Berkner)*	

Description of Workshops & Speaker Information

Workshop #1: Three one-hour workshops by AI Society, UT Dallas – SLC 1.102

8:30 - 9:30 am: *Intro to Natural Language Processing: Sentiment Analysis of Reviews - Amol Mavuduru* Sentiment analysis is a common task in the field of natural language processing and has applications in disciplines ranging from marketing to clinical medicine. In this workshop, we will work with a famous dataset of IMDb movie reviews from a Stanford study and learn how to apply feature extraction techniques to text data. Using this dataset and the power of Python and SciKit-Learn, we will train a classifier that can distinguish between positive and negative movie reviews with a high level of testing accuracy.

9:40 - 10:40 am: *Training Neural Nets with Microsoft Azure - John Laroche* My primary goals are to improve coding literacy, logic applications and knowledge of tools students can use in an approachable and interesting manner. Few options to acquire these tools for free and use $500 free monthly azure credits will be discussed. Afterwards covering the basics of machine learning, we will discuss the applications to our actual real life projects. Then we will apply the ML principles to a dataset from the titanic, and how certain variables such as age, money paid per ticket, sex and other factors influenced survival rates on the night the Titanic sank. We will use Azure's data lab features to build a training set and score it against a test set from the data to determine the accuracy of the algorithm's learned predictions of survival by feeding the control into the algorithm and comparing its outputs with the real results of the event.

10:50 – 12 noon: *Intro to Deep Learning for Computer Vision - Ram Narayan Lakshmanan* This workshop will cover computer vision basics with convolutional neural networks in Tensorflow. In addition to providing a tutorial on Tensorflow and deep learning for computer vision, we will cover interesting topics in this field such as style transfer on artistic images such as photographs or paintings.

Requirements: Laptop with pre-installed software – we will email the requirements to all the participants.

Workshop #2: Data Science Visualization Techniques – SLC 2.303
Presenter: Tarry Singh, founder & AI Neuroscience Researcher @ deepkapha.ai linkedin.com/in/tarrysingh He is also a mentor for Deep Learning course @ Coursera & his book "Deep Learning / AI Projects" is expected to come out in September 2018!

Data science skills are in great demand and data visualization is the best way for an aspiring data scientist to enter deep learning profession. In this workshop we will quickly cover Numpy — a fundamental package for scientific computing, and Pandas — we will learn about Series and Frames and do a fast analysis of our data and do the major part of our workshop learning about various data visualization told such as Matplotlib, Seaborn and more tools.

Requirements: Laptop with pre-installed software – we will email the requirements to all the participants.

Description of Tech-Talks & Speaker Information

Deep Learning for the Masses
Presenter: Tarry Singh, founder & AI Neuroscience Researcher @ deepkapha.ai
linkedin.com/in/tarrysingh

Deep Learning is a fast emerging field and is the electricity that will light up the era Artificial Intelligence. In this talk, we will visit the history of deep learning, discuss popular techniques such as CNN briefly and conclude with how you can become an experienced Data Scientist rapidly.

AI Technology Stack - An overview of the tools and technologies for AI practitioners
Presenter: Babar Bhatti, Principal @ Quantum Grid Labs, Co-founder for Dallas AI meetup
linkedin.com/in/bbhatti

This talk provides an overview of the AI technology and architecture layers. The field of AI is rapidly changing making it hard to understand various technology choices. Vendors often add to the hype. The talk will cover various tools and providers as well as the criteria to use to select technologies and vendors.

The spectrum of Intelligent Automation – RPA to AI
Presenter: Mike Courtney, Director, AI & Automation Solutions,
linkedin.com/in/mikecourtneyccg

An overview of the implementation approach and the technologies that are used to construct automation solutions for simple to complex business functions

Practical Applications of AI - Case Studies from Customer Service, Sales and Marketing
Presenter: Babar Bhatti, Principal @ Quantum Grid Labs, Co-founder for Dallas AI meetup
linkedin.com/in/bbhatti

This talk will focus on how AI and ML is applied in the areas of customer service, marketing and sales. It will illustrate a framework that connects business objectives and use cases to technical solution creation, interpretation and presentation.

Automating Disease Management Using Answer Set Programming: Heart Failure
Presenter: Dr. Zhou Chen, UT Dallas www.hlt.utdallas.edu/~yzcchen

Management of chronic diseases such as heart failure (HF), diabetes and chronic obstructive pulmonary disease is a major health care problem. A standard approach that the medical community has devised to manage widely prevalent chronic diseases such as heart failure is to have a committee of experts develop guidelines that all physicians should follow. These guidelines typically consist of a series of complex rules that make recommendations based on a patient's information. We describe a physician advisory system that codes the entire set of clinical practice guidelines for heart failure management using answer set programming (ASP). Given a patient's medical information, the system generates a set of guideline-compliant recommendations just as a human physician would. The system works even in the presence of incomplete information.

Scaling Deep Learning AI beyond experimentation to deployment at scale
Presenter: Mandeep Kumar, CEO & co-founder, deepcognition.ai, linkedin.com/in/mandeep1

This presentation will discuss various barriers that currently exist for businesses to practically design and deploy AI at scale. It will also showcase how Deep Cognition's free AI platform is reducing time of development and deployment of Deep Learning models in businesses.

AI frontiers in Oil and Gas
Presenter: Vikram Jayaram, Staff Scientist (AI/ML Engineering), Pioneer Natural Resources Company, linkedin.com/in/vjayaram

Advances in artificial intelligence (AI) technologies and increases in high throughput computational architectures, cloud based solutions have driven present-day decision making through the analysis of petabytes of rich data coming from the oil fields. Not only that, in the recent trend of global oil price decline, these advancements can save time, reduce operational expenses, enhance efficiencies, mitigate risk and manage health and safety. AI technologies has now become an integral part of the operations of most oil and gas companies, allowing them to gather large volumes of information in real-time and translate data sets into actionable insights. In this talk, I shall go over few prominent use cases where AI technologies have made the most impact to our businesses while also pushing the state of the art of geophysical acquisition methods.

AI Application in providing reverse logistics solutions and InsurTech on Mobile Devices *Presenter:* Chintan Shah, Vice President – DS, Analytics, ML & BI, HYLA mobile linkedin.com/in/chintanhshah

Artificial technologies (AI) is assisting with providing reverse logistics solutions on millions of mobile devices. Artificial Intelligence is used to come up with Predictive Pricing, Diagnostics (Robotics and remote) and Optimization of Sales Channels. Remote Diagnostics running on AI Technologies and Deep Learning forms the backbone of new InsurTech solutions providing eligibility for Device Insurance remotely.

The Philosophy and Mechanics of Intelligence
Presenter: Robert Nally, AI/ML Software Developer, ClearOne linkedin.com/in/rnally

This presentation will raise questions about our current understanding of what intelligence is and then presents a challenge (something like a Turing test) to write a program that will produce primitive intelligence via an artificial evolutionistic process.

What is Intelligences? What is Cognizance? Are they the same thing? Cognizance is the PROCESS of acquiring and understanding information. Intelligences is the ABILITY to acquire and apply knowledge. Is Intelligences a prerequisite for Cognizance or is the ability derived from the process?

Coding Computer Vision Model in 45 minutes - Deep Learning on GPUs
Presenter: Pablo Marin, Microsoft linkedin.com/in/pablo-marin-8a03083

Pablo will use TensorFlow library to create and train a CNN (Convolutional Neural Network) that can classify pictures into 10 different classes. He will use the CIFAR-10 dataset and will create a convolutional model using GPU machines in the cloud.

AI in NLP & notes from Train AI conference @ SFO
Presenter: Dr. Karen Mazdi, CS faculty, UT Dallas utdallas.edu/~kjm160430

Dr. Karen Mazdi will talk about the algorithms for advancing the state of the art of Natural

Language Generation and Natural Language Understanding. Discovering techniques that move us closer to AI approximations of how humans produce and understand language is the most exciting challenge facing AI researchers. Dr. Mazdi will specifically focus on techniques that can be applied to educational technology.

She is attending "Train AI conference" on May 9&10 in San Francisco, which features speakers like Chess Champion Garry Kasparov & leading technologists from Silicon Valley companies like Tesla, Apple & Google and several start-ups. She will share her experiences & observations with us!