Part-time Lecturer Position

The School of Materials Science and Engineering invites applications for a part-time lecturer to teach a first-year B.Eng course entitled *Introduction to Data Science and Artificial Intelligence* in Semester 1, AY2019/20 (August – November 2019).

In today's era of Information, ‘Data’ is the new driving force, provided we know how to extract relevant ‘Intelligence’ from it. This course will introduce the core principles of Data Science, and will equip the students with the basic tools and techniques of data acquisition, data preparation, exploratory data analysis, data visualization, data-based inference, data-driven actions, and data-focussed communication. The course is designed to motivate the students to work closely with data and make data-driven decisions in their field of study through practical hands-on case studies suited to students from various disciplines. The aim of this course is to take students with no prior experience of thinking in a computational manner to a point where they can derive simple algorithms and code the programs to solve some basic problems in their domain of studies. In addition, the course will include topics to appreciate the internal operations of a processor, and raise awareness of the socio-ethical issues arising from the pervasiveness of computing technology.

The course will also touch upon the core relationship of Data Science and Artificial Intelligence (AI) through machine learning algorithms, which serve as motivation for the student to further explore the cutting-edge tools and applications related to Big Data, Neural Networks and Deep Learning. The course will also discuss ethical issues in the application of Data Science and AI in practice.

**Upon completion of the course, the student should be able to:**

1. Appreciate the role of data and data-driven decisions in their field of study, and come up with relevant data-driven questions in their respective field of study.
2. Formulate meaningful data-oriented problems from the data-driven questions.
3. Collect, wrangle, clean, and prepare sufficient data relevant to the aforesaid problems.
4. Visualize the problems in terms of relevant data, appreciating the core underlying “story”.
5. Perform exploratory statistical analysis on data to intuitively grasp the relevant insight.
6. Build basic machine learning models to extract meaningful intelligence from the data.

**Criteria**

Bachelor’s degree with minimum 2 years of working experience in this field. A suitable Masters or PhD in any computing/computer science/computer engineering field will be required. It will be an advantage if the applicant is proficient in fields of Artificial Intelligence and Data Sciences, and had prior undergraduate teaching experience.

Due to the part time nature of this job, Singaporeans and Singapore Permanent Residents are preferred as candidates will not be able to get a work pass. Foreigners on dependent pass may apply.
To apply

Interested applicants should e-mail their application to fareez.rajaie@ntu.edu.sg by 30 December 2018. Application package should include a detailed CV listing their teaching and industry experience, as well as, student feedback on teaching from previous institutions, where possible.