

Data Science Summer School

June – August, 2020 at Imperial College London, UK.



I. INTRODUCTION

Data Science is successfully adding value to all the business models by using statistics and deep learning to make better decisions. A growing number of companies are now hiring data scientists to crunch data and predict possible situations and risk for businesses.

This summer school is designed for students studying any degrees of their undergraduate or postgraduate studies at a well-recognised university in China, with an interest in data science. Students will be introduced to the business of data science and develop an understanding of data science understand of the technical side of data science. It will also provide an enhanced learning experience for students to further develop their transferrable skills, hear some of the global challenges with relevant tour and company visit.

Students will:

- Learn the concept of Data Science;
- Develop an understanding of data analysis, AI and visualization;
- Learn about data science products;
- Understand the real-world applications in data science and hear from industry expert;
- Develop creativity and design thinking through a design workshop;
- Get an insight into data science entrepreneurship and hear from an entrepreneur his journey in setting up a data science company;
- Develop valuable professional skills in business model innovation, communication and presentation;
- Work as a team on a data science project;
- Visit the state-of-the-art 360 data observatory and see demonstrations of latest data science research;
- Visit London's Silicon Roundabout Tech City;
- Visit the Museum of Brands to learn brand evolution challenge and customer profiling;
- Practice and improve their English language.

In addition, students will have an opportunity to make new friends, get to know student ambassadors from Imperial College London through social activities and discuss opportunities for future study and experience what it is like to study in a world-class university.

II. PROGRAMME STRUCTURE

The programme is covering lectures, workshops, tutorials and project work. Students will be allocated into groups to work on a group project towards a project presentation on the last day of the programme.

To cater for students from different levels of technical background ability and to enhance their learning experience, students can choose to follow either a **two-week** or **three-week** stream for their group project.

Students in the **three-week** stream will be provided an extra Pre-Sessionals to succeed in the intensive learning experience at Imperial College London.

There will also be cultural and social activities organised by Imperial student ambassadors.

The entire programme will be taught in English.

(For more detailed information, please check the programme schedule in the Appendix.)

III. CERTIFICATION:

Students will receive an Imperial College London certificate of attendance on successful completion of the summer school and a prize will be awarded to the best project team. Each student will also receive a mark for their project score.

IV. ENTRY REQUIREMENTS

All students are expected to be studying an undergraduate degree at a well-recognised university in China. Students with basic knowledge of coding skills will be advantageous.

All students are required to have a good command of English and if it is not their first language, they will need to satisfy the College requirement as follows:

- a minimum score of IELTS (Academic Test) 6.5 overall or equivalent.
- TOEFL (iBT) 92 overall
- CET-4 (China) minimum score of 550
- CET-6 (China) minimum score of 520

The student who does not satisfy the language requirement, could apply for the Skype interview with the recruiting team, or provide other evidence to show that your English level satisfy the requirement.

The final project for the **three-week** stream has a higher level of complexity, students with solid computing knowledge and good software programming skills are favorable.

V. COST

The cost of the **two-week** stream programme is £3500.

The cost of the **three-week** stream programme is £4800.

This includes:

- All tuition
- Course materials
- Masterclasses

- Use of campus facilities
- Accommodation
- Social activities, including travel to and from activities
- Certificate of participation on completion of the Summer School, awarded by Imperial

The following are **NOT** included in the programme fee:

- Domestic or international travel to or from London at the start and end of the programme
- Any travel, cancellations to trips to/from the Summer School
- Any associated costs e.g. visa application costs
- Spending money
- Laundry
- Food or snacks

VI. TEACHING FACULTY

The summer school is directed by Prof. Yike Guo and taught by a multi-disciplinary teaching faculty from the Data Science Institute and other departments.



Professor Yike GUO
 Director of the Data Science Institute
 Professor of Computing Science
 Imperial College London

Yike Guo, is a Professor of Computing Science in the Department of Computing at Imperial College London. He is the founding Director of the [Data Science Institute](#) at Imperial College. He is a Fellow of the Royal Academy of Engineering (FREng), Member of Academia Europaea (MAE), Fellow of British Computer Society and a Trustee of The Royal Institution of Great Britain.

Professor Guo received a first-class honours degree in Computing Science from Tsinghua University, China, in 1985 and received his PhD in Computational Logic from Imperial College in 1993 under the supervision of Professor John Darlington. He founded InforSense, a software company specialized in big data analysis for life science and medicine, and served as CEO for several years before the company's merger with IDBS, a global advanced R&D software provider, in 2009. He was then the Chief Innovation Officer of the IDBS until 2018. He also served as the Chief Technical Officer of the tranSMART foundation, a global alliance in building open source big data platform for translational medicine research.

He has been working on technology and platforms for scientific data analysis since the mid-1990s, where his research focuses on data mining, machine learning and large-scale data management. He has contributed to numerous major research projects including: the UK EPSRC platform project, Discovery Net; the Wellcome Trust-funded Biological Atlas of Insulin Resistance (BAIR); and the European Commission U-BIOPRED project. He was the Principal Investigator of the European Innovative Medicines Initiative (IMI) eTRIKS project, a €23M project building a cloud-based informatics platform, in which tranSMART is a core component for clinico-genomic medical research, and co-Investigator of Digital City Exchange, a £5.9M research programme exploring ways to digitally link utilities and services within smart cities.

Professor Guo has published over 250 articles, papers and reports. Projects he has contributed to have been internationally recognised, including winning the “Most Innovative Data Intensive Application Award” at the Supercomputing 2002 conference for Discovery Net, the Bio-IT World "Best Practices Award" for U-BIOPRED in 2014 and the "Best Open Source Software Award" from ACM SIGMM in 2017.



Photos above: Data Science Institute 360 degree observatory and Professor Yike Guo hosting a visit for President Xi Jinping in October 2015.

VII. CONCLUSION

We are pleased to present this educational course for students from the selected universities. For further information or to discuss the proposal, please contact:

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