

# The ERA of Big Data

## Statistics、Data Mining in the Cloud Computing ERA

### 大数据时代统计、数据挖掘在云端运算之应用

谢邦昌

Ben-Chang Shia

辅仁大学管理学院商学研究所 博士班

统计資訊学系应用统计硕士班

信息科技的发展，让计算机及因特网技术进步，企业运作和个人生活皆因科技技术进步而有所影响，并且数据被快速大量的生产并储存于计算机之中，人们面临分析海量数据时，对于计算机运算能力、储存装置与网络速度的需求增加，但往往受限于计算机硬件规格，无法动态调整资源，使得等待计算机响应时间过久，经济效益因此降低了。

云端运算提供强大的运算能力，可以用来仿真计算、数据分析，用户可以很容易透过网络随时随地处理海量数据运算和储存，本研究基于云端运算 SaaS 软件即服务的模式，建置云端运算为架构的数据分析平台，协助用户解决海量数据运算和储存之问题。

#### **Abstract:**

The advancement of computer and Internet technology has not only changed business operations and people's way of life but also increased computer's capacity to produce and store big data. To analyze big data, we need faster computers, larger storage devices, and broader network bandwidths. However, if computing resources cannot be dynamically adjusted due to any hardware constraint, an excessive

amount of time may be wasted on waiting computer responses, and the economic efficiency of the entire system will be reduced.

Cloud computing provides a large and powerful computing capacity that can be used for simulation and data analysis. Cloud computing allows users to easily process and store big data via the Internet at anytime and anywhere. Based on Software as a Service (SaaS) model of cloud computing, this study established a data analysis platform to assist users in processing and storing big data.