

accurately evaluated. Statistics derived from hundreds or thousands of individual timing measurements allow a thorough assessment of the performance of the communication network under different conditions.

ISAIC-MS-1171 DATA: Digital Archiving and Transformed Analytics -- Applied Machine Learning in feasible, analytical, scalable and testable approach

Sheldon Liang^{1,*}, Peter McCarthy²

¹*Lane College, Jackson, TN, USA*

²*Kimberly Quinn, Raymond Sommerville, Claudine Uwiragiye, USA*

**Corresponding author: SLiang@lanecollege.edu*

Abstract. As cloud-based web services get more and more capable, available, and powerful (CAP), data science and engineering is pulled toward the frontline because DATA means almost anything-as-a-service (XaaS) via Digital Archiving and Transformed Analytics. In general, a web service (via a website) serves customers with web documents in HTML, JSON, XML, and multimedia via interactive (request) and responsive (reply) ways for specific domain problem solving over the Internet. In particular, a web service is deeply involved with UI & UX (user interface and user experience) plus considerate regulations on QoS (Quality of Service) as well, which refers to both information synthesis and security, namely availability and reliability for providential web services. This paper, based on the novel wiseCIO as a Platform-as-a-Service (PaaS), presents digital archiving 3 and transformed analytics (DATA) via machine learning, one of the most practical aspects of artificial intelligence. Machine learning is the science of data analysis that automates analytical model building and online analytical processing (OLAP) that enables computers to act without being explicitly programmed through CTMP. Computational thinking combined with manageable processing is 4 thoroughly discussed and utilized for FAST solutions in a feasible, analytical, scalable and testable approach. DATA is central to information synthesis and analytics (ISA), and digitized archives plays a key role in transformed analytics on intelligence for business, education and entertainment (iBEE). Case studies as applicable examples are discussed over broad fields where archival digitization is required for analytical transformation via machine learning, such as scalable ARM (archival repository for manageable accessibility), visual BUS (biological understanding from STEM), schooling DIGIA (digital intelligence governing instruction and administering), viewable HARP (historical archives & religious preachings), vivid MATH (mathematical apps in teaching and hands-on exercise), and SHARE (studies via hands-on assignment, revision and evaluation). As a result, wiseCIO promotes DATA service by providing ubiquitous web services of analytical processing via universal interface and user-centric experience in favor of logical organization of web content and relational information groupings that are vital steps in the ability of an archivist or librarian to recommend and retrieve information for a researcher. More important, wiseCIO also plays a key role as a content management system and delivery platform with capacity of hosting 10,000+ traditional web pages with great ease.