

ICT341 Web Informatics Programming

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY JAN

Synopsis:

ICT341 Web Informatics Programming introduces students to the challenges and importance of Web content analysis for business and operational intelligence. Both tasks require the development of a pipeline that collects, indexes, searches, analyzes and visualizes data based on web content and logs. Challenges and issues facing web content structure, collection and processing will be explained. Students will be introduced to the tools, and exercise them, to resolve the challenges and issues. Based on these, students will apply what they learnt in Web and data programming through an integrated system that supports systematic interaction with data for various decision-making tasks. Students will also be presented with cases in different domains to exercise the understanding and skills in Web informatics programming.

Topics:

- The importance of Web content analysis
- Varieties of Web content, including social media posts and system logs
- Data Pipeline for processing Web content
- Survey on implementations and systems of Data Pipeline
- Challenges in data collection
- Approaches to collect varieties of Web content
- Issues with structured and unstructured data
- Methods to index web content
- Factors in Web content analysis and visualization
- Systems for analyzing and visualizing web content for Web intelligence
- Case study of Web content analysis in the business domain
- Case study of Web content analysis in the system administration domain

Textbooks:

: Learning Elastic Stack 6.0: A beginner's guide to distributed search, analytics, and visualization using Elasticsearch, Logstash and Kibana
ISBN-13: 9781787281868

Learning Outcome:

- Apply Web and data programming
- Discuss the challenges in Web content analysis
- Construct the data pipeline for Web content analysis
- Propose and apply an integrated solution consisting of Web and data programming
- Formulate strategies to collect, index and analyze Web content
- Implement Web content analysis platform for business and operational requirements
- Set Up a working Web content analysis solution in a case study

Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Continuous Assessment	PRE-CLASS QUIZ 1	2
	PRE-CLASS QUIZ 2	2
	PRE-CLASS QUIZ 3	2
	QUIZ 1	6
	TUTOR-MARKED ASSIGNMENT 1	18
Overall Examinable Components	ECA	70
Total		100