

Hokkaido University Syllabus					
<div> <div></div> <div>Course Title</div> </div>					
Knowledge Base					
<div> <div></div> <div>Subtitle</div> </div>					
<div> <div></div> <div>Instructor (Institution)</div> </div>					
Masaharu YOSHIOKA (Faculty of Information Science and Technology)					
<div> <div></div> <div>Other Instructors (Institution)</div> </div>					
Masaharu YOSHIOKA (Faculty of Information Science and Technology) James Allan					
<div> <div></div> <div>Course Type</div> </div>				<div> <div></div> <div>Open To Other Faculties / Schools</div> </div>	OK
<div> <div></div> <div>Year</div> </div>	2019	<div> <div></div> <div>Semester</div> </div>	1st Semester (Summer Term)	<div> <div></div> <div>Course Number</div> </div>	215102
<div> <div></div> <div>Type of Class</div> </div>	Lecture	<div> <div></div> <div>Number of Credits</div> </div>	2	<div> <div></div> <div>Year of Eligible Students</div> </div>	~
<div> <div></div> <div>Eligible Department / Class</div> </div>				<div> <div></div> <div>Other Information</div> </div>	
<div> <div></div> <div>Numbering Code</div> </div>	GIST_CSIT 6110				
<div> <div></div> <div>Major Category Code</div> </div>	<div> <div></div> <div>Major Category Title</div> </div>				
GIST_CSIT	Graduate School of Information Science and Technology (Computer Science and Information Technology)				
<div> <div></div> <div>Level Code</div> </div>	<div> <div></div> <div>Level</div> </div>				
6	Specialized Subjects (advanced) in graduate level (Master's Course and Professional Course)				
<div> <div></div> <div>Middle Category Code</div> </div>	<div> <div></div> <div>Middle Category Title</div> </div>				
1	Knowledge software science				
<div> <div></div> <div>Small Category Code</div> </div>	<div> <div></div> <div>Small Category Title</div> </div>				
1	Applied knowledge software science				
<div> <div></div> <div>Language Type</div> </div>					
Classes are in Japanese.					
<div> <div></div> <div>Course list by the instructor with practical experiences</div> </div>					

Key Words

Knowledge base, Database, Knowledge Discovery, Clustering, Semantic Web, Ontology, Information Retrieval, Information Extraction

■ ■ Course Objectives

Knowledge base is a system to store varieties of data and knowledge for utilizing them. Basic knowledge and techniques about knowledge base are lectured and methods for knowledge discovery and retrieval using web information are also presented.

■ ■ Course Goals

Expected outcomes of the lecture is to understand

- . Utilization of database for storing knowledge
- . Knowledge discovery technique from large scale data
- . Information retrieval and extraction from Web texts.

■ ■ Course Schedule

Semantic web and ontology: 4 lectures

Semantic web aims to utilizing web information by describing semantic information of the text that can be processed directly and indirectly by machines. Concept of semantic web and related techniques are lectured.

Information Retrieval: 5 lectures

Information retrieval is an important pre-process for knowledge utilization in texts. Information retrieval model, evaluation metrics, and query operations are lectured.

Information extraction from Texts and its application: 4 lectures

Several techniques for extracting and utilizing information in the text are lectured. Especially, issues related to information extraction and sentiment analysis are presented.

Database for large scale data: 2 lectures

Introduction of NoSQL database and its application are lectured.

■ ■ Homework

Basic knowledge of programming, and basics of database (relational database) are needed.

■ ■ Grading System

Evaluation will be carried out by the using reports. There are two types of reports. One is for a short report for each class and the other is a final report for all of the classes.

■ ■ Practical experience and utilization for classes

■ ■ Condition of tasking the subject

■ ■ Textbooks

講義資料を配布し、適宜参考書を示すが、教科書は用いない。Original materials will be distributed, and references will be indicated in the class.

■ ■ Reading List

■ ■ Websites

Website of Laboratory

Additional Information

Update

2019/01/31 11:57:54