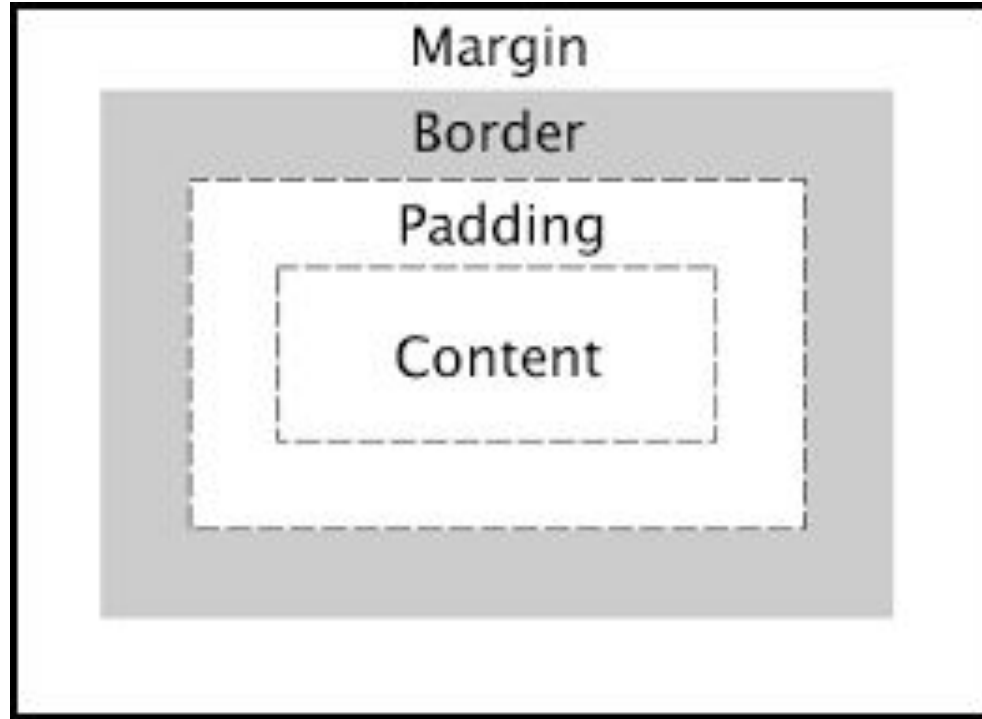


# UPLB ICS PeakOne

Enabling Remote Access to UPLB ICS  
Technical Reports

# CSS Box Model



# UPLB ICS PeakOne

Enabling Remote Access to UPLB ICS  
Technical Reports

# Background

At the height of the COVID-19 pandemic, establishments worldwide were closed in order to minimize the spread of the virus. This includes schools and universities. During this time, accessing research materials within the university premises became difficult. Although there are many online resources, access to relevant and local materials is essential in research.

PeakOne aims to simplify the search process for technical research papers conducted and submitted in UPLB ICS by providing a clean and simple web application that primarily serves Thesis and Special Problems (SPs) accomplished by ICS students and researchers.

# Statement of the Problem

Access to digital educational resources, including research materials, has become essential. However, looking up previous thesis and SPs can only be done by going to the physical library, lacking a convenient remote access option.

# Significance

The study introduces a web application that allows remote access to UPLB ICS technical research papers. It emphasizes user-friendly interfaces for efficient searching and management of theses and SPs within UPLB ICS. The application ensures easy maintenance and benefits both researchers and ICS administrators/staff by improving access to previous studies and management tools of current and future research.

# Objectives

The main objective of this study is to create a web-based platform that enables remote access to technical research papers of the University of the Philippines Los Baños Institute of Computer Science. Its specific objectives include:

- provide an online and accessible service to look up studies conducted in UPLB ICS;
- create an interface for students to submit their SPs and Thesis; and
- allow ICS faculty members and admin staff to manage and keep track of existing research papers.

# Features



# OPAC and Search

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Search

### PRAXIS: A Web-based Application for Integrating and Expediting CMSC 198 Practicum Activities

Cyrus Jude E. Cardano, Juan Miguel J. Bawagan III

The PRacticum Activity eXpediting and Integration Software (PRAXIS) is a unified dashboard web-application that functions as a platform for conducting different tasks related to the CMSC-198 internship program. It includes support for task management, timekeeping, and messaging functionalities accessible to student interns, company representatives, and practicum advisers. Developed using the MERN stack (MongoDB, Express, React, and Node), the system received a mean S.U.S. score of 86 from twelve evaluators—evenly represented by University faculty members and students. Emphasis on UI/UX improvements is highly recommended for further system development.

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### Classification of Digital Audio Files with Spectrogram Analysis and Convolutional Neural Networks

John Philip C. Carreon, Juan Miguel J. Bawagan III

The convenience and accessibility of digital storefronts has increased the usage of digital music. However, the quality of digital music can not always be verified by checking encoding and bit rate in the metadata. Bad quality transcodes harm artists who produce high quality music and consumers who download an imperfect product. This study examines the use of spectrogram analysis to classify audio files using a convolutional neural network (CNN). Audio samples were randomly selected from online sources and converted into spectrogram images. These were used to train and evaluate the accuracy of the CNN. Evaluation revealed that the model scored 98.39% in overall accuracy. The model scored the lowest in precision for FLAC and VO files which means that their spectrograms can be tricky to distinguish. Additionally, a desktop application was developed as an interface for inference. Results suggest that classifying audio files is effective through the use of spectrograms and a CNN.

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### A Web-Based Management Reporting System for Villa Remedios East Homeowners Association

John Christopher Angeles, Jaime M. Samaniego

The Villa Remedios East Homeowners Association (VREHOA) is a private organization with the aim of improving the residents' quality of life through proper management and use of organization funds. Not having a single platform for their management needs, record-keeping is done manually through the use of tools such as a spreadsheet. Task assignments are also done via messages through social media, SMS, or verbally. This study aims to provide a Management Reporting System to the VREHOA which will serve as a platform to record their income, expenses, resident complaints, and officer task assignments. Having a single platform for their management needs, the Management Reporting System aims to aid the VREHOA by providing relevant information to be used for decision making.

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### TONECOME: A Spaced Repetition Model with Tonal Features for Thai Vocabulary Learning

John Michael S. Tugay, Miyah D. Queliste

Efficient and effective communication is important along with the rapid developments in the society and various cross-cultural interactions. A major factor in communication is the speed of language acquisition. This study developed a spaced repetition model that uses tonal features to predict the user recall rate of a Thai word. Data used to develop the model was from an Android applets from Android participants for 14 days. The developed model was observed to have the best performance among previously implemented models, improving the performance of its base model by 22.7%.

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### Peanut Mold Detection Via Marker-based Watershed Segmentation and An Artificial Neural Network With Feedforward Backpropagation

Samuel Darwin D. Lagrosas, Lei Kristoffer R. Lactuan

Peanut seeds are susceptible to mold infestation such as Aspergillus, which causes the release of aflatoxins, a carcinogenic substance that can harm human and animal health. The aim of this study is to develop a method for detecting peanut mold using computer vision and artificial intelligence. To isolate the peanut seeds from acquired images for color and texture analysis, marker-based watershed segmentation was applied. RGB, HSV, and Grayscale color spaces are used to extract color features, whereas Gray Level Co-occurrence Matrix properties are used to extract texture features. Selected relevant features were fed into a feedforward backpropagation neural network, which generates values ranging from 0 to 1, with values closer to 1 indicating mold contamination and values near 0 indicating non-



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Implementing Simulation of Cancer Cell Growth Using Compute Unified Device Architecture (CUDA)

Web-based Information System of NCT's Media Content Evaluations

DormFinder - A Peer-Based Online Information and Rating System for Student Dormitories in UPLB

ARMAS: A Raspberry Pi-based Monitoring and Alert

Accessible by the general public, this allows users to look up technical reports using keywords and search terms.

# Favorites

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Disk-O: Cloud File Storage System for Students' Organization in University of the Philippines Los Banos

Carl Vincent V. Pua, Joseph Anthony C. Hermosilla

Students' Organization in University of the Philippines Los Banos (UPLB) use Google Drive in managing and sharing files of their organization. However, there is a challenge when managing the files in the Shared with me due to its interface and what the students usually share. The sharing option is also limited to Restricted. Within the University of the Philippines, and Anyone which makes it hard if an organization wants to share a file within the organization only. Disk-O aims to solve this by making a new interface of Shared with me and implementing roles and its permissions. The average scores on Post-Study System Usability Questionnaire (PSSUQ) version 3 were 2.34 in System Usefulness, 2.29 in Information Quality, 2.16 in Interface Quality and 2.26 in Overall. All of the respondents agreed that the implementation of roles and its permissions is useful.

♥ Remove from Favorites | Published on July 2020, Search Score : [\[BibTeX\]](#)

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**Automatic Network Bandwidth Control Application for Linux-based Internet Connections**  
*Korinto Miguel G. Agunaldo, Joseph Anthony C. Hermocilla*  
This paper automates linux network traffic control using a graphical user interface.  
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**DormFinder - A Peer-Based Online Information and Rating System for Student Dormitories in UPLB**  
*Francis Gabriel P. Quinsan, Fermin Roberto Lapihan*  
The limited mobility imposed by lockdown restrictions due to COVID-19 have made it difficult for UPLB students to scout for dormitories and lodging in Los Baños, Laguna. This study has developed a web application to give an avenue to students and those seeking lodging to find dormitories in Los Baños. It also serves as a platform for landlords and dorm owners to advertise their establishments. Information regarding COVID-19 Health and Safety practices that an establishment adheres to is provided in the website, and given at the discretion of the landlord/dorm owner. The usability of the web application was evaluated using a System Usability Scale. With ten (10) respondents, the test garnered an average SUS score of 81.5%.  
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**Disaster Relief in Laguna: A Geographical Information System Through Crowdsourcing on Facebook**  
*Karen Anne S. Tolentino, Joseph Anthony C. Hermocilla*  
In the Philippines, disasters happen unexpectedly. A need for better and faster reporting to the government and to the people concerned is high. Social media makes information widespread by providing tools that lets people easily share information to the public. Statistics show that Filipinos use Facebook as their main social networking site. Given the problem and the technology, an application is created to fulfill the need for a coordinated system during disasters. The application combines the power of Google Maps, Facebook, and the concept of Crowdsourcing.  
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**SAGIP: A Mobile Application for Emergency Response Using Geolocation**  
*Angela Beatriz P. Javier, Joseph Anthony C. Hermocilla*  
Efficiency is a must during emergency situations. The SAGIP mobile and web application was developed to help improve the current emergency response system in the Philippines by integrating geolocation in its main features. The mobile application makes it simple to find local responders and provide critical information, while the web application allows responders to view the user's data and current position. The respondents evaluated the quality of the application using a questionnaire based on the ISO 9126 standard. The evaluation showed that the respondents were "satisfied" and would "likely" use and endorse the application.  
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# Admin Features

# User Management

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User Management  
Research Papers

Email	Name	User Type	Upload	Delete
jtgálvez1@up.edu.ph	Juan Miguel Galvez	Admin ▾	Allowed	Allowed
jmtgalvez@gmail.com	Juan Miguel Galvez	Student ▾	Not Allowed	Not Allowed

Admin users have the ability to change users' classification and site permissions.

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Title	Authors	Submitted By	Upload Date	Actions
PeakOne: Enabling Remote Access to UPLB ICS Technical Reports	Juan Miguel Galvez, Joseph Anthony Hemocilla	jgalvez1@up.edu.ph	16 Aug, 2023	 

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Admin users are able to approve or remove user submitted technical reports. They also have the ability to edit the reports' details such as the title, authors, or abstract.

# Methodology



# Development Tools



**Flask**



# User Survey

As of 27 July 2023, the service has 174 registered users. They were sent an email via Google Forms requesting for feedback on the web application. The users are asked to rate the ease of use of the system. Feature requests and other comments were also taken. Thirty-four (34) responses were recorded.

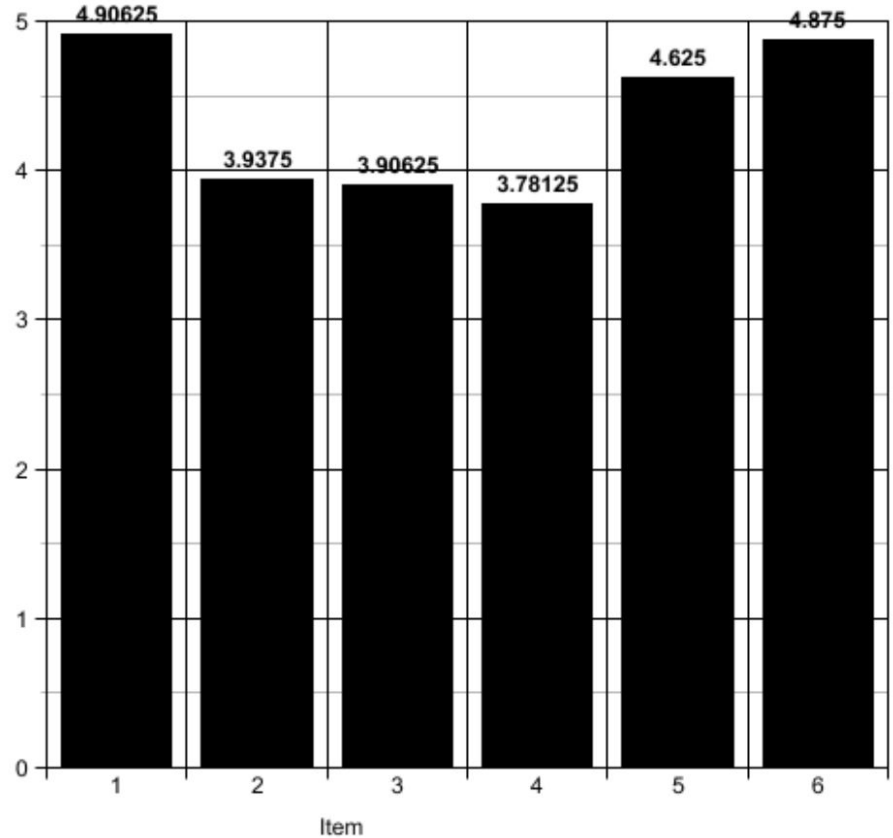
# Survey Results

The survey consists of six items with a scale of 1 to 5, from extremely difficult to extremely easy. The items are:

1. How easy is it to login using your UP Mail account?
2. How easy was looking up relevant research papers?
3. Is it easy to add to your favorite research papers?
4. Do you consider it easy to look for previously viewed research papers?
5. This service is useful to my research process
6. I would recommend this service to my peers

For items 5 and 6, the scale is from strongly disagree to strongly agree.

Average



# Survey Results

## Requested Features:

- Tags and categories
- Filtering and sorting
- Author / Researcher profile
- Way to contact the authors
- Tutorial
- Copy APA or MLA citation format
- Statistics
- Most viewed / featured / suggested papers

## Comments, Suggestions, or Feedbacks:

- Improvements on search; including filters and sorting
- Cleaner and better UI; mobile responsive design
- More publications
- Useful and impactful
- “Simple but usable”
- “I hope ICS will permanently use this service”
- “Good Job.”
- “Contrats peak-one team!”

Thank you!