

Enhanced Speech Recognition in Automated Home Lighting System

Sk Abu Baker Siddik^{*a}, Wan Nor Al-Ashekin Binti Wan Husin^a

^a*Faculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
sheikhabubakersiddik@gmail.com, wanashekin@nilai.edu.my*

Abstract

In today's world, people are increasingly relying on computers and smartphones to perceive information such as sound, pictures, phrases, vibration, temperature, and more. This reliance is driven by the rapid development of computing hardware devices and the continuous development of application software. Previous research findings indicate that the performance of speech recognition is not very good when the system captured voice commands from a noisy area within a home environment. Hence, research on the speech-recognizing methodology to perform speech recognition in Smart Home areas has been conducted. The main objective of this research is to enhance the performance of speech recognition in a noisy environment. This voice recognition system will help the disabled and elderly people to control their home appliances such as lights while benefiting those seeking smart technology for a more luxurious life. The most famous and efficient technologies of speech recognition are Zigbee and Bluetooth, both considered short-range wireless communication systems for identifying speech command signals. Among these, the Zigbee system requires continuous internet connectivity and its signals are not directly compatible with mainstream computers, whereas the Bluetooth system operates independently of the internet and is directly compatible with any mainstream computer through its wireless communication system. This research also gives a description of checking and processing recorded noisy voices using MATLAB. The programming is done in Windows operating system software called Arduino IDE, MATLAB, and MIT App Inventor. Different decibels (dB) sound levels were captured in different distance levels with Smart Noise Application. MATLAB is used to perform the algorithm of the filter where Adaptive Filtering is used to minimize the unwanted noise. Adaptive Time-Frequency Domain Noise Removal (TFDNR) Algorithm was used to reduce background noise. This paper provides an overview of noise reduction, offering significantly improved outcomes for future research.

Keywords: Speech recognition, Android, Bluetooth, Matlab, Adaptive filter, Background noise, Decibel.

Emotion-Driven Music Recommendations Using Unified Deep Learning

Tiew Ying Ying^{*a}, Rajesvary Rajoo^a

^a*Faculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00018999@students.nilai.edu.my, rajes_e@nilai.edu.my*

Abstract

Music is an important part of human life, it can evoke a wide range of emotions, including happiness, sadness, anger, and excitement. The existing music recommendation system has room for improvement in the precision and recall of the model. This project introduces a Unified Deep Learning Model (UDLM) that revolutionizes music recommendation systems by seamlessly integrating emotion recognition from speech. The goal of this project is to improve the precision and recall of the model using this UDLM method and to achieve an accuracy of 85% for the overall emotion detected. Leveraging the Interactive Emotional Dyadic Motion Capture (IEMOCAP) dataset, renowned for its emotional speech data, pre-process audio using Mel Frequency Cepstral Coefficients (MFCCs), Pitch, and Energy to construct an emotion recognition model. The emotions that are trained from this dataset include happiness, sadness, neutrality, anger, excitement, and frustration. The core contribution of this project lies in the development of the UDLM, which synergistically combines emotion recognition with music recommendation. By integrating the emotional context extracted from the user's speech, this model generates more relevant and emotionally aligned music suggestions. The unified architecture enables concurrent learning of emotional features and music preferences, driving streamlines learning and aiming for an accuracy of 85%. In short, a unified deep learning model refers to a single neural network architecture that integrates speech emotion recognition and music recommendation tasks, enabling seamless interaction and joint learning between the two tasks.

Keywords: Emotion recognition, Music Recommendation, Deep Learning, Unified Deep Learning Model

Maintaining Quality of Manufacturing Products: How Process Control Plan (PCP) Relates with Quality Based on Metal Stamping Industry

Siti Norhidayah Binti Aman

*Demand Options Sdn.Bhd.
Batu Pahat, Johor, Malaysia
awanbiru953@gmail.com*

Abstract

This project proposed a quality control shown in a process control plan (PCP) based on metal stamping products in a manufacturing facility. Metal stamping is used widely at an international level as it is majorly known in sectors such as automotive, aircraft, hardware, appliances, and electronics component. It is a process where the metal is pressed into useful components or parts. Despite its popularity, the quality it has is much more important in order to ensure the safety of the end user. A process control plan or PCP is a living document that records the methods that will be done so that quality control is taken into action for the products to meet customer requirements. This paper will further discuss how the quality is controlled based on the use of a process control plan (PCP) in each process to ensure that only good parts are being made.

Keywords: Metal Stamping, Manufacturing Facility, Process Control Plan (PCP), Quality

Real-time Parking Spaces Availability Information for Parking Lots Using YOLOv5 and IOT Cloud

Hiew Wei Jun^{*a}, Muhamad Hafez bin Mohd Arifin^a

^a*Faculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00019135@students.nilai.edu.my, mhafez@nilai.edu.my*

Abstract

Smart parking system in Malaysia only provide which line of parking lots have empty parking space to drivers but the one issue that come out from this is drivers need to go searching the empty space by them self and sometimes the parking space is already parked by someone's car. Besides that, some parking lots still use the traditional system because drivers need to find out parking spaces by themselves, in Malaysia. Drivers can already pay the parking fee through online parking apps, but Malaysia doesn't have any system to let the driver know which space is empty by receiving real-time information. Hence, in this project, a smart parking system will be developed using the Yolov5 image recognition technique combine with any suitable cloud services provided by the IoT cloud platform. Yolov5 image recognition algorithm will be used to recognise the vehicle license plate and update the cloud-based database system. The updated information then distributes to all registered users to give real-time availability of spaces in the parking area and let the drivers can booking the parking space to propose a high-precision vehicle recognition attendance system the current problems of existing object recognition technology are identified and studied in this project will focus on implementing this system at parking lots.

Keywords: IOT, OpenCV, IOT cloud

Traffic Light Optimization Using IoT-Based Car Detection and Centralized Control

Jagdesh Singh^{*a}, Muhamad Hafez bin Mohd Arifin^a

^a*Faculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
jagdeshs422@gmail.com, mhafez@nilai.edu.my*

Abstract

Traffic congestion has become a serious issue as a result of the growing number of vehicles in urban areas. This situation has negative environmental effects, lost time, and increased fuel use. This will happen when there are traffic lights located near each other in the main stretch. With this novel solution, "Traffic Light Optimization Using IoT-Based Car Detection and Centralized Control," is to solve this crucial problem. This project proposes a ground-breaking system that uses real-time data from infrared sensors and the Arduino Cloud platform to precisely adjust traffic signal timings, leading to a more efficient flow of traffic. For instant vehicle detection and placement, our strategy involves the deployment of infrared sensors. Critical data from these sensors is fed to a centralized administration platform running on the Arduino Cloud. In this case, powerful algorithms carefully examine the input. The result is a quick adjustment to the timing of the traffic lights that skilfully accommodate the current traffic dynamics. Additionally, because of our solution's inherent adaptability, scalability, and affordability, it may be used in a variety of urban environments. Our proposal differs from conventional traffic light systems in numerous significant ways. As a result, it significantly reduces traffic congestion by synchronizing the timing of traffic lights with actual traffic patterns. By reducing traffic delays, it also reduces fuel use and improves air quality. In contrast to the current fixed-timing systems, the system's capabilities for remote access and real-time data utilization provides a transformational breakthrough. Our method does, however, have some drawbacks and restrictions. It is prone to disruptions because its functionality depends on the hardware. The system would revert to its default settings for conventional traffic lights in the event that an infrared sensor malfunctioned. We intend to improve redundancy by adding more backup components and integrating camera features in the future in order to reduce this risk. Overall, our project demonstrates the enormous potential of IoT-driven solutions for reducing urban traffic congestion. Cities are well-positioned to revolutionize their transport systems, reduce negative environmental effects, and improve the standard of living for their citizens by using our ground-breaking traffic signal optimization technology.

Keywords: Arduino, IoT Cloud, IR sensor

Machine Learning-Based Predictive Modelling of SPM Exam Results: Utilizing Form 3 and Form 4 Performance

Waleed Rashid Amur Al-Barwani^{*a}, Noor Zuhaili Mohd Yasin^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00019064@students.nilai.edu.my, rajes_e@nilai.edu.my*

Abstract

The project aims to improve how accurately we predict SPM (Sijil Pelajaran Malaysia) exam results using advanced machine learning. Current methods struggle to capture the connection between students' earlier academic performance and their final SPM grades. To overcome this, the project plans to create a new predictive model that combines different machine learning techniques like Decision Tree Classifier, Support Vector Machine (SVM) Classifier, Naïve Bayes, and Random Forest Classifier. By using these techniques together, the project wants to build a strong prediction system that makes SPM result predictions more accurate. This involves carefully looking at how students perform in form 3 and form 4 to really understand their academic journey. Combining these two sets of data will make the model's predictions even better. Unlike usual methods, this model goes beyond just looking at one point in time. It pays attention to how students change and develop academically over time, especially between Form 3 and Form 4. The method used for predicting is really important and involves studying past patterns, understanding each algorithm, and how they work together. This new model improves on previous ways of doing this by using better algorithms and more data. If successful, it could change how we predict academic performance. This would help teachers, policymakers, and students get more accurate ideas about how well they might do. It's not just about guessing – it gives useful information to help people make better choices and give individual help to students.

Keywords: SPM exam results, Prediction system, Decision Tree Classifier, SVM Classifier, Naïve Bayes

Real-Time Train Schedule Management System Using Genetic Algorithm

Kirththi Priyaa Magindran^{*a}, Ts Harlina Harun^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
kirththipriya@gmail.com, harlina@nilai.edu.my*

Abstract

The difficulties of train delays and out-of-service disruptions have risen to prominence in the quickly evolving world. The transportation industry is changing in favour of more effective and responsive systems. The proposed real-time train timetable management system, while its impressive capabilities, also face possible difficulties and inadequacies. The system may be at risk from errors or disturbances in the accuracy and dependability of real-time train data, which could affect how well the rescheduling tactics work. In response to delays or out-of-service incidents, the proposed real-time train schedule management system uses a genetic algorithm, which was inspired by nature's evolution process. The system's brain is real-time train data, which includes traffic and delay data on trains and is used to generate a variety of potential rescheduling strategies. The genetic algorithm is a clever tool for solving problems because it mimics nature's strategy of combining various elements for improved results. The system works by gathering real-time information from moving trains and segmenting the information for each train. Certain train characteristics are noted and act as indicators for spotting potentially suspicious behaviour. The identified attributes are then processed by a specialized classifier, which accurately detects and alerts potential disruptions brought on by delays or trains that aren't running. The primary objectives of the system are to ensure the accuracy and dependability of train schedules, foster respect among train operators, and boost overall productivity.

Keywords: Genetic algorithm, real-time train data, specialized classifier, accuracy, dependability, productivity

TikTok: Systematic Review of Recent Trend for E-Commerce Business

Sai Darshini Thirunawakaran^{*a}, Ts Harlina Harun^a, Ts Laxamanan Kurappa^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
darshini@nilai.edu.my, harlina@nilai.edu.my, laxamanan@nilai.edu.my*

Abstract

The evolution of technology and advent of digital era with digital marketing taking its paramount emergence has been a way of life in this modern contemporary time. One of the most prevailing mediums in this contemporary era is none other than Tiktok Shop. The modern business world, be it small or big, relies for a fast and effective e-commerce through Tiktok Shop. For customers who often shop online, this application provides an attractive and easy interface for product marketing and for purchasing products. Statistically, it has emerged to be the easy and leading application business tool of this modern times. The background of this research is to investigate Tiktok Shop on why it gets viral very fast as a new e-commerce media and can even run in parallel with other e-commerce. Therefore, this research serves as an instrumental tool that can easily disseminate e-commerce as quickly and reach out to customers faster and more efficiently without the hassle of glitches like delay. Tiktok can be labeled as an instant application in this contemporary global business. The research method is based on observations and interviews with various parties, namely, business people and customers. The results of this study are in the form of exposure based on the research objectives presented, which enables us to have concrete evidence findings that this Tiktok Shop has influence and is worthy of being used as new e-commerce along with other e-commerce in conducting business processes. In conclusion, Tiktok Shop is truly an alternative tool for the fast-growing business arena from a global perspective.

Keywords: Digital Marketing, Electronic commerce, TikTok Shop

Creating an ASP.NET Platform for Talent Recruitment and Employment

Wang Tenghui ^{*a}, Rajesvary Rajoo^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
wangtenghui9@gmail.com, rajes_e@nilai.edu.my*

Abstract

In response to the evolving landscape of talent recruitment and employment, this research endeavors to address the existing gaps by introducing an innovative ASP.NET platform. The motivation stems from the need for an efficient and comprehensive solution to connect job seekers and employers, while optimizing the recruitment process. The methodology adopted for this research involves the systematic design and development of the ASP.NET platform. Through the utilization of cutting-edge web technologies and the ASP.NET framework, the platform aims to provide a user-friendly and robust environment. The development process incorporates iterative design, agile methodologies, and rigorous testing to ensure a seamless and intuitive user experience. The research yields substantial outcomes. Job seekers gain the ability to create detailed profiles, submit resumes, and explore job opportunities using refined filters. Employers benefit from an integrated system for posting job listings, managing applications, and evaluating candidates through an intuitive dashboard. Notably, the platform incorporates an intelligent matching algorithm, driven by machine learning techniques, to suggest the most suitable candidates for specific job roles. In conclusion, this research presents a novel ASP.NET platform that redefines talent recruitment and employment practices. By addressing the limitations of existing systems, the platform offers a holistic solution that caters to the needs of both job seekers and employers. The implications are significant, as the platform streamlines the connection between talent and opportunities in the digital age. As technological advancements continue, this platform stands as a pivotal contribution to the enhancement of the recruitment process.

Keywords: ASP.NET, talent recruitment, employment, user-friendly, job seekers

Online Job Postings for Career Pathway Analysis Using Web Scraping and Data Mining

Ildio Boya Yehouessi ^{*a}, Noor Zuhaili Mohd Yasin^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00017446@students.nilai.edu.my, zuhaili@nilai.edu.my*

Abstract

The objective of this project is to harness the capabilities of web scraping and data mining techniques to conduct an in-depth analysis of online job postings, with a specific focus on identifying and delineating career pathways through the application of network analysis. The process entails the systematic extraction and exploration of job postings data, which in turn yields valuable insights into the fundamental prerequisites and proficiencies essential for diverse career trajectories. Moreover, this approach unveils potential trajectories for career progression within a given field, contributing to a comprehensive understanding of the dynamics of professional growth. In pursuit of these objectives, the project will utilize Python as its primary programming language, employing its extensive libraries and frameworks to facilitate efficient and robust execution of data mining and network analysis tasks. Python's versatility and rich ecosystem make it well-suited to handle the intricacies of extracting, processing, and analyzing complex job postings data from a variety of online sources. The outcomes of this analytical endeavor hold significant implications for various stakeholders. For job seekers, the insights derived from the analysis offer valuable guidance in identifying the most sought-after skills and qualifications for their desired career paths. Employers stand to benefit by gaining a nuanced perspective on prevailing job market trends, enabling them to tailor their hiring strategies to align with the evolving demands of their industries. Policymakers, too, can leverage the findings to inform workforce development initiatives and employment policies, promoting more effective talent management and allocation. It is worth noting that the pursuit of web scraping and data mining is underpinned by ethical considerations, particularly concerning data privacy and usage rights. Adherence to ethical standards is paramount throughout the project, ensuring the responsible collection and utilization of job postings data.

Keywords: Web scraping, Data mining, Online job postings, Career pathway analysis, Network analysis, Data privacy.

Choosing the Right AI Model for Effective Plant Disease Detection: A Comparative Study

Utayasurian Rajoo ^{*a}

*Asia Pacific University of Technology & Innovation
Technology Park Malaysia. Bukit Jalil, Kuala Lumpur 57000.
utayasurian97@gmail.com*

Abstract

In 2015, all United Nation (UN) members enforced an idea about sustainable development to bring peace and prosperity for humans and planet for current and future generations (United Nations, 2023). Hence, they created a total of 17 Sustainable Development Goals (SDGs) for all countries as a set of global goals. These 17 goals are mainly focused on economic, social and environmental. Many researchers had already started to contribute on how to utilize Artificial Intelligence (AI) in different industries. One of the main sectors that researchers found out that AI can help achieve food hunger and promote a sustainable development within the agriculture industry. This is to promote the growth of farming businesses in a way to sustain a continued population growth in the future. Within this context, the imperative of sustainable agriculture and food security stands as a pivotal objective, necessitating innovative approaches to enhance crop productivity and address threats such as plant diseases. Among these, the utilization of Artificial Intelligence (AI) models has emerged as a promising avenue for effective plant disease detection, holding the potential to revolutionize agricultural practices. This research will discuss and compare different AI models that are currently being tested by researchers to find out which AI model is recommended for plant disease detection.

Keywords: Plant Disease Detection Models, Artificial Intelligence and Sustainable Development

Jarvis Club Registration System

Ng Cze Kiew ^{*a}, Wan Nor Al-Ashekin Binti Wan Husin^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
kiewkiew1229@gmail.com, wanashekin@nilai.edu.my*

Abstract

The Jarvis Technology Club Registration System is a project aimed at improving the efficiency of event registration and payment processing for members and committee members while reducing the administrative burden on committee members. Not only that, but in terms of member registration, the system can save the information that members update at any time. This project used the waterfall model methodology. There are two data collection methods implemented in this project: interview and questionnaire. The interview sessions are conducted with Jarvis Technology Club's committee members for club registration management. The questionnaire is distributed to Jarvis Technology Club's members and 20 members have participated. The system's architecture, database design, and user interface were then planned and developed. The system is developed using HTML, JavaScript, CSS, and PHP. The results have shown that the system allows member registration, event management, and membership fee payments. In conclusion, the system is developed to streamline the registration and payment process for events organized by the club, reducing the administrative burden on committee members and improving efficiency. The system will also continue to improve in the future including the implementation of some or all these future improvements, and the event management system can be more user-friendly, efficient, and effective for members and committee members.

Keywords: Club registration, event registration, membership payments.

Recipe Sharing Platform

Jeff Sia Yu Heng ^{*a}, Muhamad Hafez bin Mohd Arifin ^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
siayuhengjeff@gmail.com, mhafez@nilai.edu.my*

Abstract

In Malaysia's rich cultural mosaic, the need for a harmonious Recipe Sharing Platform that respects and caters to diverse dietary preferences has become paramount. This research presents a visionary endeavor to construct a digital ecosystem that seamlessly connects culinary enthusiasts from various religious and cultural backgrounds. The platform offers a centralized interface for discovering, creating, and sharing recipes while embracing dietary restrictions and allergens as integral components. Through meticulous analysis and innovative design, the platform incorporates a tailored filtering system capable of sifting through ingredients to accommodate dietary nuances stemming from different traditions, such as halal practices and veganism. At its core lies a robust database, meticulously sculpting user profiles, recipes, ingredients, and their intricate interactions. The crowning achievement is the platform's ingenious filtration mechanism, adeptly harmonizing individual dietary preferences with cultural distinctions. This Recipe Sharing Platform is more than a technological endeavor; it serves as a cultural conduit, effortlessly merging technology and tradition. In a nation defined by its diversity, the platform stands poised to become an emblem of culinary unity, honoring both personal dietary desires and the cultural heritage that defines Malaysia. With visionary zeal, this initiative bridges ancient culinary wisdom and contemporary digital innovation, providing a haven for gastronomes to converge and partake. As the aromas of Malaysian kitchens weave their tapestry, this platform embarks on a flavorful journey, not just uniting taste buds, but fostering a profound appreciation for diverse dietary customs. Ultimately, this culinary odyssey transcends the digital realm, testifying to the enduring threads that interlace food, culture, and human connection.

Keywords: Recipe Creation and Sharing, Digital Interaction, Filtration Mechanism, Ingredient Analysis, Centralized Interfaces

Number Plate Detection System

Hanshraj Kumar ^{*a}, Thagirarani Muniandy^{a*}

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
rhanshtaj0@gmail.com, rani@nlai.edu.my*

Abstract

The use of number plate recognition systems in a variety of industries, including traffic control, law enforcement, and parking management, has attracted a lot of interest. This study describes a computer vision-based number plate identification system that is reliable and effective. The suggested method accurately locates and extracts license plates from pictures taken by security cameras using image pre-processing, feature extraction, and machine learning techniques. Using a collection of annotated photos, a machine learning model is trained to further increase the precision of number plate identification. The model uses convolutional neural networks (CNNs) and other approaches to learn the specific characteristics of license plates and identify them from other items in the picture. Even in situations with changing illumination, vehicle orientations, and backdrop clutter, the trained model can localise number plates properly. The efficiency of the suggested number plate identification system in practical situations is shown by experimental results. The system is appropriate for applications needing dependable and effective number plate identification because it achieves a high detection rate while retaining a low false positive rate. The created system advances Number Plate Recognition technology and has the potential to enhance traffic control, law enforcement, and security systems.

Keywords: License Plate, Recognition System, Security Camera, Detection rate

Online Voting System for Nilai University

Ye Yaresh Kulasegaran^{*a}, Rajesvary Rajoo^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
yaresh0210@gmail.com, rajes_e@nilai.edu.my*

Abstract

In the rapidly digitizing landscape of educational institutions, the demand for efficient and transparent decision-making processes within clubs and societies has grown significantly. Most of the universities nowadays are using physical elections in their clubs to choose the representatives like president, secretary and more. University students often have busy schedules due to academic commitments, part-time jobs, and other extracurricular activities. They might feel that participating in elections would require a significant time investment that they can't afford. Thus, this project presents an innovative solution, an "Online Voting System for Nilai University," aimed at streamlining the election process for club officials. Leveraging the power of HTML and phpMyAdmin, the system provides a user-friendly platform for clubs and societies to conduct elections seamlessly. Through this system, registered members can participate in the voting process by logging into their respective club accounts, viewing candidate profiles, and casting their votes securely. The utilization of phpMyAdmin ensures the proper management and storage of voting data, ensuring data integrity and security. The results of the elections are tabulated and displayed instantly, eliminating the need for manual counting and reducing the turnaround time for the announcement. This system not only enhances the overall efficiency of the election process but also fosters a sense of inclusivity and transparency within the university's extracurricular community. In conclusion, the "Online Voting System for Nilai University" stands as a testament to the potential of technology to reshape and optimize traditional processes, facilitating fair and timely club elections while promoting engagement and participation.

Keywords: Decision-making processes, Online voting system, HTML and phpMyAdmin, cast votes, security

Auto Generating Timetable system

Chang Guo Rui^{*a}, Wan Nor Al-Ashekin Binti Wan Husin^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00019608@students.nilai.edu.my, wanashekin@nilai.edu.my*

Abstract

The Auto-Generating Timetable System (AGTS) is dedicated to automatically generate the timetable for all computing courses at School of Computing, Nilai University. The existing timetable system is suffered from redundancy of the time, courses and venue. Existing system also lacked the capability for the Head of School (HOS) to monitor lecturer-hour requirements. The main aim of this project is to develop an Auto-Generating Timetable System (AGTS) that capable to automatically generate schedules and produce detail reports on lecturer activities for monitoring purposes. To achieve this goal, an interview session with the HOS is conducted to gather insights regarding the preferences and constraints related to the existing timetable system. Utilizing the valuable input, an automated scheduling system is designed to efficiently allocate time based on lecturers' availability and the semester's subject requirements. This innovative schedule differs from the conventional static approach, ensuring adaptability to evolving circumstances. Furthermore, it empowers the HOS by providing clear visibility into individual lecturers' workloads and any modifications made. The system is built with PHP, HTML, and Tailwind CSS. By addressing these challenges, this project is able to enhance the university's timetable management. The AGTS is benefit both HOS and the lecturers, providing an optimized solution that caters to the unique needs and streamlining scheduling processes.

Keywords: Timetable, redundancy, monitor, generate, efficiency, innovation, adaptability, visibility, optimize

Typing Education Game

Lim Chun Xin ^{*a}, Muhamad Hafez bin Mohd Arifin ^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00019539@students.nilai.edu.my, mhafez@nilai.edu.my*

Abstract

This project aims to develop a typing education game to improve typing skills among individuals of all ages, with a focus on proper keyboard use and efficiency. The game, built using Unity, includes various levels and challenges to cater to different typing abilities and provides real-time feedback to users on their typing accuracy and speed. In the game, users can destroy enemies by typing the correct words that are displayed on the enemy's body or above it. The project's goals and objectives are to educate people on how to use the keyboard properly and to increase typing efficiency. The target users for this project are everyone, particularly kids and elders. The research methods used for this project include online research, videos, and articles.

Keyword: typing education game.

Note Minder System

Nur Tee Laili Binti Muhammad Shahyu Tee^{*a} Noor Zuhaili Mohd Yasin^a

*^aFaculty of Engineering, Science and Technology, Nilai University
No 1, Persiaran University, Putra Nilai, 71800 Nilai, Negeri Sembilan
n00019662@students.nilai.edu.my, zuhaili@nilai.edu.my*

Abstract

This project is the process of gathering data from a source or event. As we live in an era where everything is just at our fingertips, students rarely use books to write anything. They prefer using advanced technology such as laptops, tablets, and mobile phones. They bring the device wherever they go instead of carrying the book wherever they go. Note Minder is free to use, so that it can reduce the cost of buying paper or notebooks for each. It can assist students to not worry about missing paper or notebooks. It will help students easily find the sources they want. The purpose of the Note Minder project is to encourage students to take notes on their lectures during class, assignments, readings, and other learning activities. They do not need to flip through pages one by one to find the topic they want in their book. Using the Note Minder, they can separate and label their notes, so that they can easily find the notes and just click on them. It can save more time. In Note Minder, students are the ones who will be using it. When the students register, the admin will get the analysis of how many percentages of students use the Note Minder.

Keywords: Save notes, Edit notes, Write notes