



Internship Report
Bachelor of Science (BSc.)
Major: Digital Business & Data Science

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Abstract

New Vision Art & Science Institute employed me as their Data Analysis Intern allowing me to present my professional experiences in this report. My responsibilities at New Vision Art & Science Institute throughout my internship included starting with entry-level data tasks before moving onto social media metric evaluations and thorough analysis of collected data. During regular tasks at New Vision Art & Science Institute I analysed financial records and audience distributions using pandas library in Python and generated important analytical results with matplotlib and seaborn libraries.

The main aspect of my work consisted of analysing payment methods through daily revenue breakdowns and performing audience distribution examinations by age groups. By using Facebook analytics, I analysed the demographics alongside geographical areas where audience members from New Vision Art & Science Institute interacted. The visualization tools I developed included bar charts and pie charts and bar charts to understand recognized patterns and trends.

Through my internship responsibilities I received access both to entering data and examining data while maintaining accurate data records. The optimization of data system connections through my work led to increased dataset organization which supported efficient team operations.

The document reveals the operation methods for data cleaning processes along with details on data analyst representation techniques and analytical approaches. Participating in this program provided me with practical skills to work across large datasets along with number computation and social media analytical tasks that aimed to support business strategic choices. Internship experience at ING Direct provided me business-oriented analytical skills that produced technical and practical advancements.

Introduction and research question

My opportunity to apply data analytics solutions for real business problems emerged as I worked as an intern at New Vision Art & Science Institute. The two essential datasets that formed the base of my internship duties at New Vision Art & Science Institute included financial income documents and payment registries alongside participant numbers. The organized information became vital strategic data for organizational decision-making along with strategic planning purposes.

The competitive advantage of organizations relies heavily on data analytics because educational institutions and businesses base their essential decision-making process on options selection through this tool. The examination of financial data payment records and audience behaviours statistics became essential for me to extract meaningful information about customer behaviours and financial performance indicators while working as an intern.

Practitioners performing internship work had to meet two essential conditions.

- Monitoring revenue patterns daily allowed us to find our busiest days which enabled better scheduling of production times and developing pricing strategies and show promotion plans.
- The internship monitored payment method influence on organization revenue by studying electronic transactions and traditional cash payments. The organization gained insight to determine where investments should be allocated either in payment infrastructure enhancement or dedicated payment channel development.
- Organizations should perform demographic research on age groups and geographical locations of cities because audience profiling enables the creation of customized marketing strategies. Our analysis of audience distribution patterns together with geographical data enabled us to outline proper marketing target areas and determine what demographics interact most with institute services and which cities showed better response to combined online and offline initiatives.

This study examined how revenue trends changed on a daily basis through the following research inquiries:

- How do daily revenue trends behave over time?
- What are the most commonly used payment methods, and how do they contribute to total revenue?
- How do age groups and cities affect audience engagement?

The research investigated whether regular patterns existed regarding the production of revenue over time. The study intended to detect when revenue motions reached their highest or lowest levels throughout the week, month and yearly calendar periods. The organization would benefit from identifying peak revenue periods to enhance operational methods and promotion methods and other business activities.

Payment system assessment along with customer preference tracking required an examination of cash payments along with online payments to decide which payment methods operated most effectively. The analysis exposed ways to enhance customer payment processes while creating new methods to boost payment efficiency.

Organizational demographic information about audience participants leads institutions to create targeted marketing methods. The institute should direct its strategic marketing activities toward its main established customer groups via specific advertising initiatives based on their demographic characteristics. Markets divide based on acquisition data which enables the institute to create specific marketing strategies.

I implemented academic techniques of data cleaning together with statistical and visualization tools to address problems which required practical solutions during my internship. My internship analysis provided vital leadership decisions and deepened my comprehension of business analytics' strategic value for both financial management systems and marketing procedures as well as customer service activities. Through intern activities I learned operational business skills by connecting academic knowledge with practical experience that strengthened my knowledge of data science impacts on operational effectiveness.

Description of the Internship Provider

New Vision Art & Science Institute exists as an innovative educational institution that promotes excellence in arts and sciences through its educational curriculum. The institution delivers various programs to develop creative skills and scientific exploration through its curriculum. Germane to each unique learner New Vision Art & Science Institute delivers educational experiences of conventional and creative types. Students can participate in offline or online educational programs through which the institution serves students from any corner of the globe. By sustaining a dual educational model, the institution maintains adaptability and service quality toward contemporary students throughout an evolving educational setting.

The main goal of New Vision Art & Science Institute focuses on using innovative educational programs to encourage and teach students from multiple backgrounds. The educational institution uses modern technological advancement together with traditional knowledge to empower their students who want to understand how art and science intertwine in modern society.

The data analysis team where I worked remotely at my internship position contributed crucially to developing the institute's strategic planning initiatives. The data analysis team manages all the significant datasets from various institute operations by interpreting large quantitative and qualitative data sets originating from student registration processes and course enrolment systems and payment platforms and audience engagement systems and financial performance reports. The business operations together with marketing strategies and educational offerings receive guidance through analytical breakthroughs based on such data sets.

I worked to evaluate financial information, audience information and operational information data which helped produce actionable insights. I performed multiple tasks as an intern which cantered mainly on the following duties:

- **Analysing Datasets:**

I processed three different types of information at work including revenue data together with payment transaction details and student demographic information. The information analysis through Python utilized the pandas and NumPy libraries to complete both data cleaning operations and processing and

analysis steps. Part of my responsibilities included eliminating faulty datasets before creating pivot tables for identifying key performance indicators (KPIs). Through these responsibilities I obtained financial understanding of the institute by examining payment patterns between student enrolment behaviours and activity access.

- **Creating Visualizations:**

The development of visual data representations through matplotlib and seaborn functions was a major duty in my role. Organized visuals transformed complex information into logical patterns which enabled stakeholders to identify patterns together with anomalies during their decision-making process. The visualizations in my work displayed revenue tracking through line plots together with bar charts showing payment type distributions and pie charts providing population statistics according to age brackets and cities. Company strategy received guidance from data findings that management shared using visual communication methods.

- **Reporting and Presenting Findings:**

The completion of analyses led me to generate summary reports about crucial findings which I delivered to management officials. The staff displayed visual representations as well as described the observed patterns found within the data during their presentations. The analysis included presenting total revenue breakdown by payment method percentages and it showed the student population breakdown and geographical city-based student preferences. The organized data collection generated usable information which the management team used for choices about marketing strategies payment system improvements and new course development based on student demand patterns.

- **Supporting Business Operations:**

Along with technical data analysis capabilities I gave supplementary assistance to business operations by entering data while maintaining consistency across files and helping maintain datasets. I attended regularly scheduled team meetings to share ideas about enhancing data acquisition methods and collection process improvement alongside our team members who worked on

active projects. My participation in this cooperative venture enabled me to comprehend better how quick data analysis contributes to executive-level decisions within a high-pace academic setting.

My internship experience involved learning how to employ various data management tools while getting familiarized with the regular activities of organizations that base their operations on data. The workplace exposure enabled me to deepen my knowledge about business management functions and the way institutional strategies depend on data. Working remotely gave me a special professional test yet created space for strengthening my abilities at communication and time management. I successfully joined the team via video meetings and online collaboration platforms and email correspondences which permitted meaningful contributions to the institute's data analysis project. The dynamic working environment at New Vision Art & Science Institute enabled me to grow my analytical capabilities by supporting the institution in creating data-driven decision strategies. The internship exposed me to practical business and educational data applications of analysis alongside improved technical skill development.

Initial Situation / Problem Definition

New Vision Art & Science Institute joins numerous educational organizations when it comes to generating substantial data collection from its diverse business operations which involve student enrolment numbers along with payment processing details and revenue streams and audience participation metrics. The institution adopted no organized systems to analyse its data before I started my internship period. Making decisions for financial performance and audience engagement and business strategy became difficult because of the lack of definable data insights.

Key Challenges and Issues Identified:

1. Scattered and Unstructured Financial Data:

- Various departments and platforms contained financial data that proved challenging for consolidation because it had fragmented distribution.
- The institution lacked an organized method for monitoring and analysing their financial data regarding revenue patterns alongside payment procedures and transactions.
- The organization's unstructured data distribution created problems for management to rapidly monitor financial results.

2. Lack of Insights into Payment Methods and Revenue Contributions:

- Multiple payment methods such as cash alongside online transactions were accepted for payments at the institute. The institution did not have a proper way to identify which payment method generated the highest total revenue.
- It was necessary for management to understand which payment methods dominated cash transactions and how different customer segments received their revenue distributions.
- The organization performed analyses to understand if implementing extra payment choices would positively affect their revenue stream.

3. Unclear Patterns in Audience Engagement and Demographics:

- The institution did not have established practices to reveal how its audience divided by age groups and geographic areas and gender types.
- The organization did not conduct comprehensive social media audience analysis to maximize marketing impact among its most interested groups.
- Without demographic analysis the organization struggled to create specialized services or sponsorship methods that reached the proper customer segments.

4. Revenue Fluctuations Without Clear Explanations:

- Management did not conduct regular examinations on daily revenue patterns although the amounts frequently changed.
- Management had no knowledge of which weekdays brought the highest sales, and which ones resulted in minimal revenue.
- The analysis of these patterns played an important role in business planning because it let us create promotions while improving class times and establish data-centered choices to boost our profit margins.

5. Inefficient Data Entry and Management:

- The manual data entry process for incomplete records and data inconsistencies resulted in various errors.
- The organization struggled to maintain accurate reporting through its data systems because it did not establish reliable data verification methods.
- The essential requirement of data cleaning operations had become necessary before performing any meaningful analysis procedures.

Objective of Data Analysis to Solve These Challenges:

My internship's main goal involved collecting and preparing institutional data for business revolution that made solid insights to help organizations make better choices. Specifically, my work aimed to:

- Standardized data presentation methods enable better analysis along with more readable data outputs for the organization.
- An examination of how alternative payment types affect total revenue leads to recommendations for customer payment system options.

- Student population analysis provides market intelligence which helps business development teams at the organization understand student interaction patterns.
- Evaluation of revenue patterns will help create efficient schedules and promotional plans and strategic planning objectives.
- To achieve better data accuracy and reliable future results the data entry system needs improvement through advanced processes.

The internship surpassed existing challenges to help the organization utilize data for decision-making as part of its financial strategy development alongside focused marketing and enhanced student participation.

Objectives and Tasks

The main goal during my internship at New Vision Art & Science Institute involved using data analysis approaches to provide in-depth performance insights into financial results and payment patterns and audience statistical data. I used data-driven techniques to help the institute make better professional decisions while also enhancing revenue generation and improving knowledge of its customer base.

The main analysis goal involved assessing how revenue patterns developed between different days of the week to discern consistent income generation patterns. The analysis would reveal the profitable days of operation at the institute and determine which time periods led to lower revenue. The organization could enhance revenue performance through planned adjustments in scheduling classes along with promotional campaigns because of this data identification.

The research sought to evaluate how students and their parents dispersed their payment toward course fees through different payment channels. Payment channels at the institute incorporated cash transactions and online payments yet there was no defined method that drove the highest total revenue contribution. I analysed this payment breakdown to recommend changes between existing financial procedures and possible new payment systems and increased online payment promotion.

Audience demographics proved essential at the internship. This involved investigating the age groups and geographic distribution of the institute's audience, both for student enrolments and social media engagement. My data analysis separated user information into age groups and established principal audience locations which produced important findings on active demographic segments. The institute gained vital knowledge which guided its development of marketing approaches and advertising efforts and resources for content production as it worked to develop programs that aligned with its audience's desires.

I reached these objectives through different essential tasks. Data cleaning procedures served as my first task to maintain the quality and structure of datasets across all databases through consistency checks. Smooth analysis required me to handle missing values and fix data entry mistakes before standardizing file formats. The documented data preparation met my requirements before I conducted

calculations which produced essential metrics about total revenue and payment method shares together with audience segment engagement statistics.

Produce data visualizations because it represented the most important task during the internship. Multiple plots and charts such as bar charts alongside pie charts and line plots were generated through implementing Python libraries pandas and matplotlib and seaborn. Business management gained clear visual knowledge about their data through the visual representations that converted numbers into understandable insights. The daily revenue trend analysis received line plot representation while payment method contributions appeared through a pie chart for visual comparison of various categories.

I undertook two primary duties for the team by doing technology-oriented work and creating reports that I presented to colleagues. I generated analytical reports that combined essential findings, trends and data recommendations to benefit the business's operational success. I presented research findings to team meetings to display the analysis meanings alongside their value in assisting strategic decisions. During my presentations I checked that technical inspection methods matched practical business applications to keep insights valuable for both information requirements and organizational implementation needs.

The range of tasks at my internship included data cleaning procedures followed by calculations and strategic reporting in addition to data visualization techniques. The tasks allowed me to assist the institute by providing useful findings that boosted business expansion while simultaneously expanding my knowledge of practical data analysis techniques.

Presentation of the State of Scientific Research

My internship work utilized research approaches from main business analytics and data science fields to analyse revenue data and payment assessment and audience statistics. The analysis of these subject areas by the New Vision Art & Science Institute as well as academic research fields utilized multiple business and academic methods to direct my workplace experiences during my internship.

1.Revenue Analysis

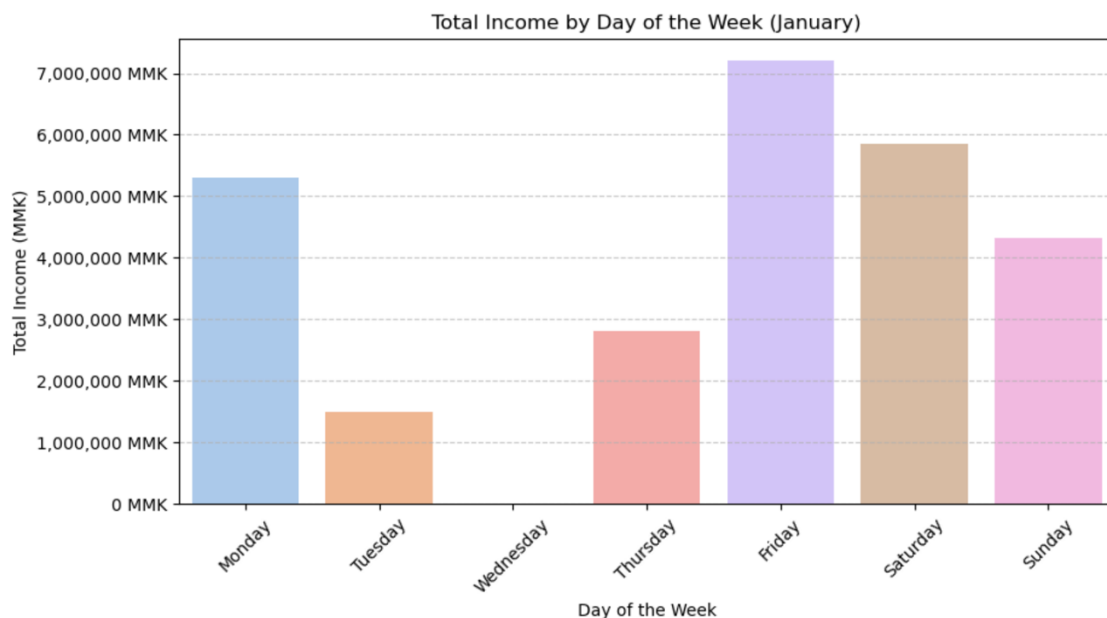


Figure 1: Daily Revenue Analysis

Organization management and financial operations substantially depend on the analysis of revenue patterns. Analysing financial time series through forecasting establishes that monitoring revenue trends enables businesses to create stronger pricing structures that enhance their financial operation cash flows. An organization strengthens both its financial decision-making and growth planning through effective monitoring of revenue changes at daily weekly and monthly intervals according to research findings in data analytics and business intelligence fields. Time-series visualization through line plots made it possible for me to identify daily revenue trend patterns operating at the institute. The gathered information about organizational

preferences helped the business to restructure marketing operations which brought about procedural improvements.

Studies in financial data analytics reveal that revenue driver identification stands fundamental while experts need to understand external factors which impact revenue generation. Companies operating in education and e-commerce and other sectors monitor revenue patterns during holidays and promotional periods and observe seasonal market fluctuations. My analytical findings about weekend peak times relative to weekdays became applicable to improve both class arrangement and promotional strategies at the institution.

2. Payment Method Analysis

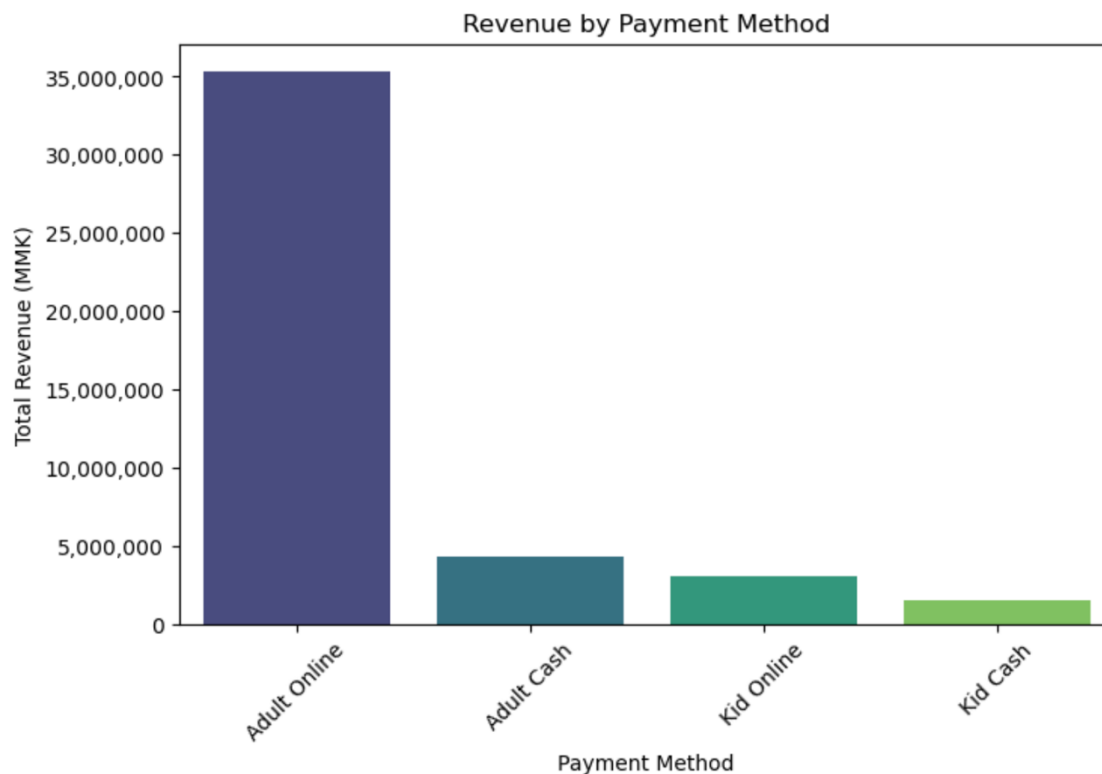


Figure 2: Revenue by Payment method

According to (Figure 2), Business income correlates directly with how customers prefer to make payments according to financial analytics data. Business revenue increases when customers choose payment methods that combine speed with security because they develop stronger loyalty to such payment systems. Consumer interest in digital payments grew rapidly because they regard them as both convenient

and accessible according to payment data analysis. Organizations need ongoing payment method surveillance to establish their approach toward payment method promotion and enhancement.

I used study-based knowledge to evaluate how different payment methods shaped the overall revenue stream of the institute during my internship period. The analysis revealed that students above the age of 18 overwhelmingly chose online payments for their transactions although cash payments remained lower. Research findings support the business need to choose digital payment options for improving both customer convenience and operational efficiency. Presenting the analysis allowed institute staff to get operational advice about cash transaction reduction along with better online payment processing and digital payment adoption to enhance payment experiences.

3. Audience Demographics and Market Segmentation

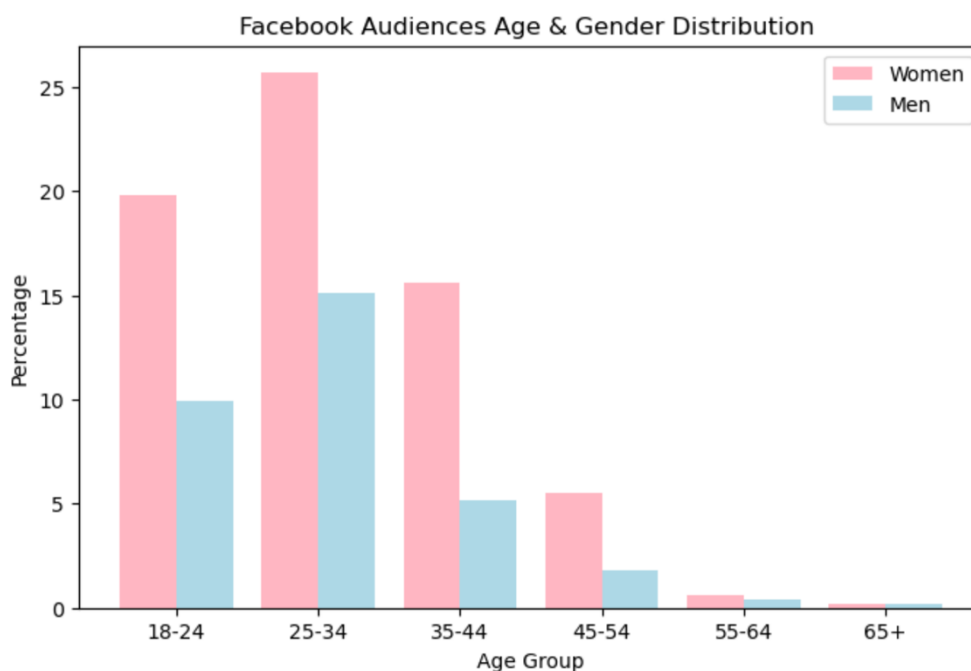


Figure 3: Audience Demographics

Audience demographics influence both the success of customer engagement approaches and marketing precision and determine business expansion potential. Market segmentation approaches working with age group analysis and geographic distribution research in addition to gender distinctions enable businesses to create

customized services leading to increased marketing achievements according to (Figure 3). The combination of audience segmentation using data brings organizations both improved customer interaction and superior advertising return on investment (ROI) outcomes according to digital marketing analysis.

During my internship I used demographic segmentation analytical methods to examine the population demographics of the institute through its social media followers and student registration records. My research showed that the youth demographic between 18 and 24 made up most of the students along with social media followers yet more participants came from older age groups. According to geographic analysis the audience with highest engagement levels consisted of users based in major cities like Yangon and Mandalay but registered little international engagement. Research shows that digital content and online education attracts young viewers who make up most student and social media engagement groups.

The research-supported approach allowed me to guide the institute in reshaping its marketing plan through dedicated attention to its most involved demographic groups. The acquired insights allow for modifying advertisements and developing age-based content creation while evaluating expansion possibilities in essential geographic markets.

4. Application of Research to Internship Work

The analysis requirements for my internship work relied on scientific methods which applied research principles to produce measurable output that would execute the findings. Revenue time-series data and payment behaviours research enabled the institute to draft strategic audience segment plans through business decisions.

The combination of scholarly material with data analysis practice created effective opportunities to unite theoretical knowledge with real-world business practice within my internship outputs. The institute gained important financial data and audience research that drove its successful growth plans.

Measures and Methodology

The internship methodology used specific organizational protocols to develop accurate data analysis methods. The research process consisted of data collection followed by data cleaning then exploratory data analysis (EDA) stage and visualization work before finishing with statistical analysis steps. These individual steps played an essential role in changing raw data into insightful information that would strengthen decision-making capabilities at New Vision Art & Science Institute.

1. Data Collection

The initial data collection stage obtained data from three different sources which consisted of internal revenue reports and audience demographic records and social media engagement data. Each dataset included essential information points about daily revenues alongside payment types together with student age data and geographical breakdown and social media interaction statistics. The ability to draw significant conclusions from data depended heavily on collecting data which was complete and pertinent to the analysis.

The obtained datasets had different structures because they included CSV file formats as well as extracted data from both internal spreadsheets and online databases. The demographic information about the audience became easier to comprehend through data collected from social media platforms that showed follower ages along with engagement rates and location distributions.

2. Data Cleaning and Preprocessing

Research data cleaning operations validated that all information would properly support analysis procedures. This process involved:

- The analysis needed dedicated procedures for both empty revenue records and demographic information without adequate data. The gap data in the dataset received processing from statisticians who filled gaps using mean or median substitution techniques while deleting unimportant information.

- Standardization of the dataset occurred with two phases in which date values transformed into datetime format along with numerical data requiring proper formatting for computational operations.
- The modelling efficiency increased because essential columns were removed from the database via filtering while following organizing procedures.
- Different department reports required comparison processes to achieve data consistency because all reports needed to be combined into a single unified dataset.

Accurate data cleaning played a critical role because unreliable data would create false results from analysis. The production of an error-free data structure enabled me to improve the accuracy of future analysis results.

3. Exploratory Data Analysis (EDA)

The investigators analysed data through EDA after cleansing it to recognize patterns along with recognizing trends and anomalies. The research group calculated various descriptive statistics that included:

- Mean, median, and standard deviation of revenue
- Frequency distribution of payment methods
- Different demographic age groups make up the audience according to the analysis which incorporates segmentation strategies.

EDA allowed researchers to discover important findings that helped choose suitable statistical and visualization methods to achieve their five objectives. The selected critical areas provided a framework to identify main audience behaviours patterns combined with income performance indicators in need of additional evaluation.

4.Data Visualization

The effective presentation of data needed Python libraries consisting of matplotlib and seaborn as well as pandas to visualize the information. The visual representation systems processed intricate data to facilitate better comprehension from management personnel. The application integrated the data visualization types within its design structure. Through the daily revenue trend line plot users can inspect temporary

modifications of their revenue statistics. Total revenue data was influenced by payment methodology distribution which is displayed in the bar charts. The payment preferences of audience groups showed up as pie charts that also included their percentage distributions. Visual elements integrated into the analysis improved intuitive understanding of insights which made data-based decision-making accessible for the organization.

5. Statistical Analysis

A statistical examination complemented the research to identify revenue breakdown and audience breakdown data. The institution investigated payment methods to establish their individual contribution to the complete revenue total. Percentage distribution of age groups: Analysing the proportion of students and social media followers within each age category. The analysis measured interaction levels between audience groups who accessed content from the educational institute. The analyses established data-based evidence to support strategic recommendations which allowed the institute to enhance its financial strategy and market approach.

The structural data-driven approach extracted vital business data points from financial outcomes along with audience statistics through its methodology. Through the combination of data preprocessing and collection methods and exploratory analysis techniques and visualization tools I delivered useful research findings to the institute. Accurate strategic decisions were possible through this method because leaders could use precise visualized data for their choices resulting in better business outcomes with better audience connection.

Results

The internship activities revealed important business insights that New Vision Art & Science Institute needed for their strategic planning. The data analysis indicated that the institute achieved its best earnings on Fridays yet earned the least revenue on Tuesdays. Research findings indicated that student activity together with purchasing patterns rose as days progressed throughout the work week. The institute used its knowledge of these trends to enhance promotional strategies for lowering revenue days while amplifying revenue generation during peak times. Further investigation proved that certain events and outside elements contributed to revenue changes which emphasized the necessity for strategic planning of activities to achieve maximum financial success. The institute investigated revenue shifts on daily basis to detect outside elements which affected total sales including special occasions and promotion events or changing consumer behaviours patterns. Knowledge gained from this analysis helped the institute develop better operating plans for its marketing and operational strategies which secured steadier revenue flow throughout the entire week.

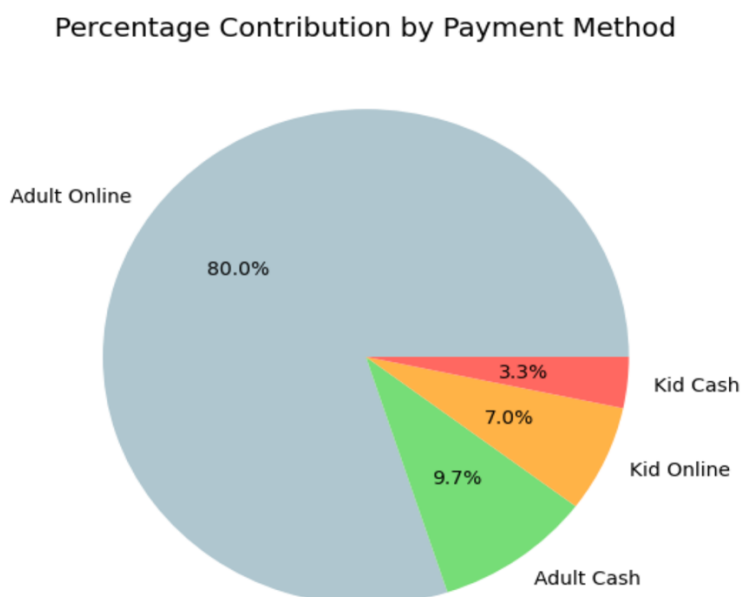


Figure 4: Percentage Contribution by payment method

Online payment options were the most popular method through which customers transacted business because they produced 77.49% of total earnings whereas adult

cash payments made up 9.37%. Customer adoption of digital payments has been steadily rising so the organization must develop better online payment solutions to match their evolving needs. The institute should direct its resources to enhance transaction speed because its main payment option of online transactions enables new payment solutions to attract more clientele. Customer preference for digital financial solutions instead of cash emerges from the minimal cash-based transaction data which guides operational decisions and market strategy development. Better payment convenience emerged from online transactions because digital payment-focused potential customers could overcome their obstacles. The study suggests that the business should establish digital payment partnerships to deliver better customer satisfaction and improved sales results. Future organizations must prioritize three essential strategic plans which merge automated payments with instalment options together with loyalty reward programs for their online customer base because these initiatives develop lasting customer commitment.

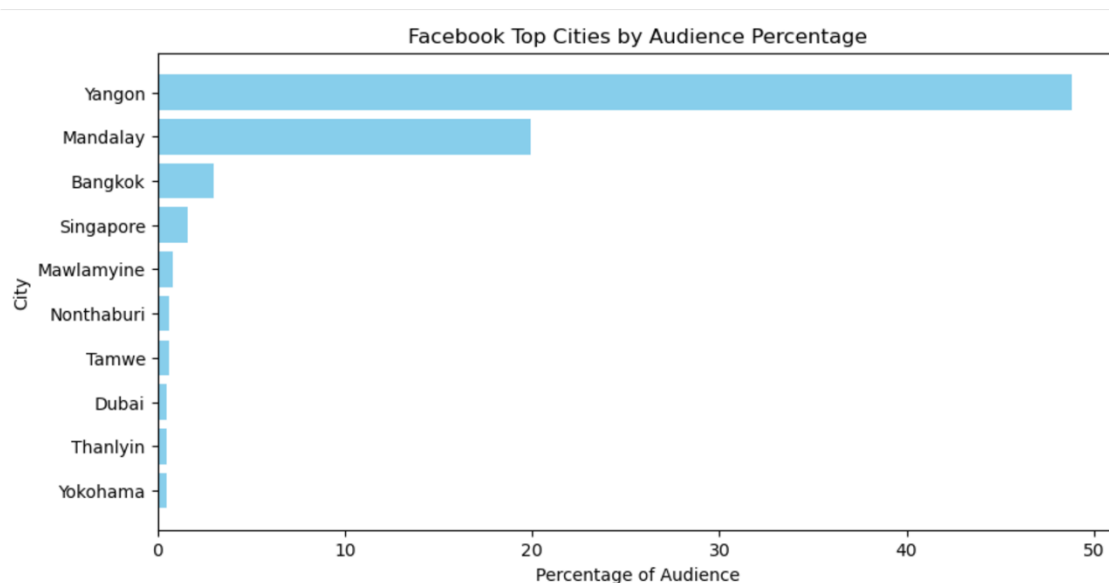


Figure 5: Top Cities

The demographic evaluation of audience composition delivered vital knowledge about the main age collective and territorial distribution patterns of participants at the institute. The main audience members participating in institute programs were young adults who ranged from 18 to 24 years old. The strong background on this age segment proved essential to improve the marketing plans as well as the curriculum

alongside message delivery systems. The geographic breakdown showed that Yangon together with Mandalay and Bangkok took the top positions as cities with the most active audience. Through this data the institute redirected its promotional activities into these targeted areas so they could plan better events and promotional methods to boost enrolment as well as revenue growth. The institute would enhance its advertising by sending social media content specifically for younger audiences while promoting educational benefits that match their selection criteria. The institute should establish marketing strategies to bring more students from under-engaged areas by understanding secondary market trends.

The research results needed efficient data presentation by using line plots alongside bar charts along with pie charts as visual tools for communication purposes. The daily revenue changes appeared in line graphs to show both profitable and less profitable dates. A single bar visualization displayed how much benefit payment platforms offered to consumer revenue on a relative scale. The pie chart showed demographics by age groups so audience members could understand this distribution pattern without effort. The presentation tools provided information visualization to help team leaders and managers build decisions using factual data evidence. The visual analytics tools presented complex trends in simplified formats which enabled stakeholders to notice indispensable patterns that allowed proper decision-making. The integration of visual elements in reports and presentations enabled a straight link between data knowledge and business implementation methods thus generating meaningful organizational actions.

Analysis results delivered a thorough knowledge of how the institute performs financially and its audience behaves. New Vision Art & Science Institute refined its business strategies through pattern analysis of revenue generation and optimized payment processing while implementing knowledge of its audience demographics to enhance financial planning and marketing results. Research outcomes verified that organizational expansion and operational efficiency and sustainability rely on using data to make decisions which proves the importance of data analysis in business practice. The workforce experience allowed an up-close view of practical data science usage within business operations which proved the need for analytical tools for organizational achievement. The institute would enhance its market position by

applying these analysed strategies to adapt student needs thereby continuing institutional transformation.

Implications and Suggestions for Practice

The analysis results generated multiple practical suggestions to boost financial outcomes and staff participation at the institute. The research indicated that optimization of financial streams demands attention on digital payment options especially for adult customers to maximize profits. As online payments already generated a large segment of total revenue the institute should work on digital payment system efficiency and accessibility to promote more customer transactions. To improve payment efficiency and security the institution should simplify procedures and introduce new protection methods together with special discounts and cashback rewards and loyalty rewards for digital shoppers. The institute will probably boost its total revenue by creating a more convenient payment system that delivers rewards to customers through its online channels. The understanding of digital payment preferences allows the institute to establish partnerships with financial service providers as well as investigate implementing new payment approaches including mobile wallets and contactless transactions and QR codes. Wider adoption of students and international students would arise due to these improved transaction features coupled with enhanced security in payment methods. Users can experience a smooth payment transaction process when the web-based payment system delivers both usability and security features along with multi-device availability to minimize enrolment obstacles.

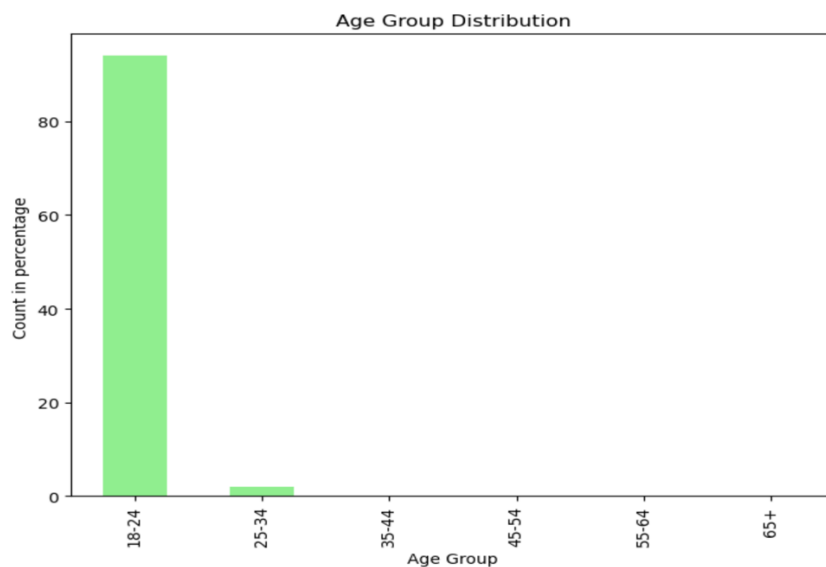


Figure 6: Age Group Distribution

The organization needs to create distinctive marketing plans directed toward attracting its main demographic of 18-24-year-old students. The institute should develop specific marketing campaigns that match the preferences of its primary target audience which consists of users aged 18 to 24 years old. By partnering with influencers and running interactive promotions focused on their future goals the college should use strategic social media advertisements to connect with young adults in this dominant age group. By targeting Facebook, Instagram and TikTok and LinkedIn for digital outreach to young adult audiences can boost their advertising effectiveness while also providing valuable information that leads to higher conversion rates. The enrolment and student participation rates will expand when the educational institution implements adaptable courses together with game-based learning systems and reduced fees for students. The institute should provide students with interactive educational materials through webinars and virtual tours and Q&A sessions to display their offerings and drive student enrolment. Understanding teenage students' needs and expectations will help the institute build programs and services which line up with their academic objectives and professional needs to create enduring student loyalty.

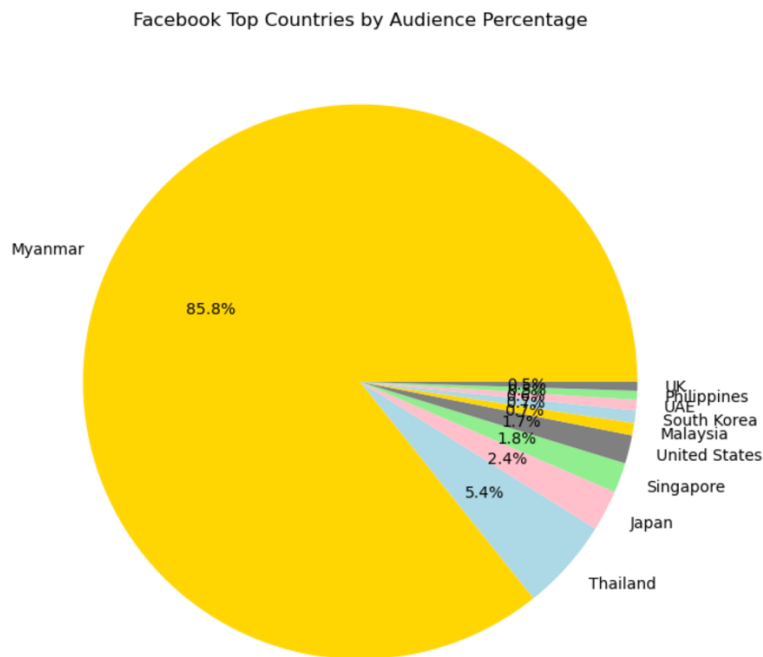


Figure 7: Top Countries

Geographic targeting established itself as an essential practice for improving audience interactive results. Audience participation reached its peak in Yangon and Mandalay cities which means localized marketing strategies should be implemented to maximize engagement throughout these areas. Using geographic targeting data as a starting point the institute should carry out targeted advertising campaigns with physical workshops and team up with local educational bodies to enhance their outreach. The institution should establish partnerships with universities and colleges and high schools throughout these cities to build referral systems and develop educational joint programs. Improved targeted customer support services together with regional-specific communication strategies will develop enhanced bonds between potential students and their families. The trust of potential students can be strengthened through native language customer support and personal counselling services which include representative staffing in local areas. Internal analysis of different cities would help the institution identify regions that show low current engagement but exhibit strong yearly growth prospects. The college should build targeted outreach programs in different nearby cities and local communities that express interest in the educational programs offered at the institution to boost student

diversity. A strategic resource allocation system would enable promotional funds to target locations bringing the greatest business value from marketing investments.

The institution can maximize revenue production while enhancing customer satisfaction and boosting market dominance through the deployment of suggested adjustments. Data-driven business strategy refinement through analysis delivers efficient institutional choices which promotes long-term development and stable operation for the institution. Experiencing an internship provided direct proof about how organizations succeed when they make business decisions based on data analysis. The institute should track financial and demographic trends in order to modify its current strategies thus maintaining its educational sector relevance and market competitiveness through time. Through enhanced digital payment systems and innovative marketing methods along with expanded outreach activities the institute would create financial strength as well as claim its position as a leading educational institution which addresses modern student requirements. To establish continuous data analysis the institute should start conducting regular performance assessments and use predictive analytics for anticipating future trends which requires business strategy adjustments.

Discussion and Prospects

During my internship at New Vision Art & Science Institute I experienced demanding work that offered valuable learning opportunities that merged academic principles with corporate practice. My experience of resolving practical business problems using data science tools combined with business analytics methods led me to essential expertise about how data drives organizations toward strategic business decisions. Through this internship experience I learned superior data analysis techniques alongside organizational data utilization methods that drive operational enhancement and customer satisfaction increases leading to business growth. The key objective of my learning experience focused on developing abilities to convert raw data into practical business results that drive strategic business growth alongside operational improvement initiatives. The practical work I did helped develop my Python programming abilities particularly with pandas and seaborn and matplotlib libraries which prove widely used in industry data manipulation and visualization tasks.

My internship experience taught me about how crucial data-based choices become for organizations when developing their business strategies. My analyses showed direct evidence that different factors such as payment methods and revenue patterns plus audience composition determine educational institution success. The analysis of payment methods revealed that educational institutions should focus their efforts on optimizing online payments applied by adult customers. This outcome proved how data optimization can produce better revenue results, yet it also revealed important business needs for digital age customer preference adjustments. Audience demographics exploration enabled the institute to understand targetable age communities and geographic areas effectively which led to better marketing strategies for student capture. The correct analysis of data demonstrates that successful organizations obtain a competitive advantage through strategic business decisions that follow industry trends.

The institute faces numerous promising possibilities regarding its data utilization in the coming years. Future development should focus on performing detailed customer behaviours studies to uncover greater details about student learning activities and enrolment-related factors at the institute. The institute possesses the

ability to enhance student learning experiences through data collection about student interactions and course completion rates and feedback collection for better student satisfaction rates. The use of machine learning algorithms for customer behaviours forecasting enables the institute to understand upcoming patterns including modifications in course interest together with changes in student enrolment numbers stemming from external factors. Predictive analytics serves the institute by enabling better market optimization and pricing formation along with capacity planning to maintain competitive student service.

Data reporting will experience automation as one of its most promising developments. The performance of reporting with prompt accuracy played a vital role in supporting business choices while I was interning. Today's organizations use outdated manual report creation for their operations yet this process both uses excessive time while also creating potential inaccuracies in data results. Real-time data accessibility to management coupled with process automation would help the institute achieve more efficient decision-making as well as operational streamlining. By implementing automation practices the organization would decrease staff member workload which would increase availability to work on strategic business initiatives. Power BI and Tableau tools allow the institute to develop interactive dashboards which present synchronized financial and student and marketing performance data in real-time format. The implementation of such a system would give decision-makers control to observe essential metrics which would help them discover trends ahead of time and implement data-based choices efficiently.

Club discovering and sentiment evaluation techniques establish new pathways for enhancing academic value delivery. The segments created by cluster analysis enable marketers to adapt both educational programs and personalized teaching toward students who share similar characteristics. Sentiment analysis works as an analysis system to understand student feedback so institutions can measure student happiness and find improvement opportunities. Through systematic implementation of complicated analytic methods across their business activities institutional operations will improve marketing practice and enhance teaching methods while enhancing customer engagement programs.

At my work placements I showed my capability to analyze data throughout educational business activities in educational sites. The practical work on real projects combined with barriers taught me how organizational change benefits from data science applications. The institute observes three primary growth strategies which include predictive analysis systems as well as automated reporting platforms and customer behaviours analysis programs. Through data-driven strategy development the institute aims to dominate the market by simultaneously strengthening both student acquisition and operational efficiency to keep operations sustainable. My studies at my internship developed both my technological skills and fundamental understanding needed to start a career in business analytics. Through this internship I have learned about how organizations utilize properly analysed data to achieve outstanding results and conduct revolutionary advancements.

Final Evaluation of the Practical Experience in Relation to the Studies

The internship provided me with the essential link between academic business analytics knowledge and practical analytics applications in professional settings. Through this experience I could step out of theoretical data analysis discussions in classrooms to observe companies using their data-driven approaches in deciding toward their objectives. The internship enabled me to put classroom-acquired data analysis knowledge into business practice while making theoretical concepts strongly established in my understanding of practical value.

The main useful lesson acquired during the internship involved working directly with data cleaning procedures and preprocessing methods. Real-world datasets provided me with firsthand experience of the practical data integrity challenges after I completed courses that taught data integrity basics only theoretically. The data contained various problems including disorder and absent values and discrepant entries, so I had to employ my problem-solving abilities to organize the information for proper analysis purposes. The lengthy and sometimes difficult data preprocessing process allowed me to better understand the educational concepts learned in my academic studies. The internship revealed that no matter how sophisticated analytical tools are the data must have proper cleaning and formatting since improper data preparation produces unhelpful results.

During my time I obtained substantial experience in statistical work by identifying patterns and trends throughout the analysed datasets. The internship provided multiple opportunities to conduct statistical tests and implement machine learning algorithms which generated important findings from complicated data. The internship experience solidified my grasp of essential statistical learnings from studies including hypothesis testing and regression analysis and correlation because they became evident in practical business use. Regression models used for revenue forecasting demonstrated to me the way variables interact in business environments and their application in strategic choices.

Visual representations proved essential during my internship work. The classroom education about visualization methods helped me understand their power

in data analysis but I grasped their complete business influence when given the chance to build real world visualizations. Through use of the Python libraries matplotlib and seaborn I built diverse types of charts which included daily revenue trend lines and revenue payment method pie representations. Through visualization creation I successfully translated complex data findings into understand and applicable displays for non-technical stakeholders to access. Through visual data presentation I gained direct insight into how data displays revealed structures in the data that would normally stay hidden within original records.

Within the internship assignment I implemented the educational concepts of predictive analytics and segmentation analysis for advanced practice. My work with audience segmentation analysis brought insights about business strategy improvement from segmentation techniques as well as technical training benefits. Customer segment analysis provided me with detailed customer preferences allowing proper modification of marketing strategies and product development approaches. Deep data analysis produces superior results than superficial examination because of its demonstrated effectiveness in the real world.

Professional experience at the corporate level inspired me to recognize data-driven thinking as the fundamental skill I learned about during this time. At first, I comprehended the concept of data-informed decision making through my studies yet my observation of this approach applying in business settings showed its true power. The analysis findings formed the basis of all marketing plans and customer interaction strategies and financial directives which I observed during my time at the company. Analysis skills strengthened through the internship while revealing the business aspects of analytics which integrates objective performance with company objectives coupled with effective reporting to organizational representatives.

Data analytics continues to expand which proves that students must stay committed to life-long learning according to my internship experience. Real-world data exposure proved the extent of my educational learning because it revealed additional knowledge gaps I needed to understand. Handling missing data along with business needs during my internship motivated me to find suitable analytical approaches that met the company requirements. The professional internship exposure drives me to

combine industry developments with personal ability improvement for better career effectiveness and adaptability.

An essential practical experience surpassed all theoretical material taught in my academic courses because of the internship placement. My role enabled me to translate conceptual knowledge learned in class into real-time data analysis activities because this practice improved both my technical abilities and problem-solving skills. Working with professional team members on genuine business datasets enabled me to understand how organizations utilize data to make decisions and how data science contributes to contemporary organizations. My internship deepened my passion for business analytics after I gained key ability sets required for starting a successful career in data analytics. This internship established my basic business analytics groundwork before I start my professional career through important skills I will utilize in my future work.

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Appendix

The data files from New Vision Art & Science Institute are excluded from this report because of confidentiality agreements. The main body of the report presents a full discussion of all data analysis and discovered insights despite the exclusion of actual data files from New Vision Art & Science Institute.

Declaration of independence

Nwe Thiri May

First and last name of the author

I certify by my signature that I have written the work presented here independently. I have not made use of any sources and aids other than those listed, in particular any online sources not mentioned. All parts taken over from the used sources literally or in the sense (no matter whether text passages, pictorial representations etc.) are marked as such individually.

This paper has not yet been submitted to any other examination authority. It was neither in the same nor in a similar way part of an examination in the previous course of studies and has not yet been published.

If a printed copy is submitted at the request of the academic supervisor:
The version of the paper submitted as a printed copy is identical in all parts to the version submitted digitally at the same time.

A handwritten signature in black ink, appearing to read 'N. Thiri May', with a stylized flourish at the end.

24.02.2025 Potsdam

Date.

place

Author's signature