Answer questions regarding Lee Wei Jin's academic background, achievements, technical proficiency, software expertise, project experience, personal qualities, interests, and internship experience according to the biography.

Biography of Lee Wei Jin

Lee Wei Jin is a highly motivated and self-driven recent graduate with a Bachelor's degree in Information Systems Engineering from Universiti Tunku Abdul Rahman (UTAR) in Kampar, Malaysia. Known for his dedication to learning and his eagerness to engage in varied projects, Lee Wei Jin continually strives to expand his knowledge, taking a proactive approach to both technical and personal development.

Academic Background and Achievements:

With a solid academic foundation, Lee Wei Jin graduated with a CGPA of 3.47, demonstrating a commitment to excellence and an aptitude for a diverse range of subjects within information systems. Despite limited exposure to machine learning within his coursework, he independently pursued this field, expanding his skill set to include machine learning principles and application. This self-driven approach to learning reflects his keen interest in the latest technological advancements and emerging areas in computer science.

Beyond academics, Lee Wei Jin was active in various student organizations and held several leadership roles that showcased his dedication to his university community. He served as the Vice Chairperson for both the R.C.M. New Student Orientation Organizing Team and the UTAR Philharmonic Orchestra, highlighting his organizational and leadership skills. He also contributed as an Advisor for the UTAR Philharmonic Orchestra Concert, Treasurer for the Music Club Interaction Night, and a frequent helper for events such as blood donation campaigns and martial arts showcases. His participation as both a helper and performer in these events underscores his versatile talents and commitment to teamwork.

Technical Proficiency and Software Expertise:

Lee Wei Jin has developed an extensive skill set in programming, web development, and system design. His programming language proficiencies include C++, Java, Python,

JavaScript, and PHP, with intermediate proficiency in most of them. His technical capabilities extend to database management, where he is familiar with both Oracle and MySQL, as well as cloud technologies, notably Microsoft Azure. Additionally, he has a working knowledge of frameworks and libraries like MVC and jQuery, which he utilized in various university projects.

One of his unique strengths is his adaptability with diverse tools and resources, effectively leveraging online resources like Stack Overflow, AI chatbots, and diagram creation tools to assist him in debugging and resolving complex issues. This skill highlights his resourcefulness, efficiency in problem-solving, and capacity to utilize emerging digital tools to enhance his work.

Project Experience

Throughout his academic journey, Lee Wei Jin worked on several impactful projects, which showcase his ability to apply his skills to solve real-world problems and create functional applications:

1. Machine Learning Feedback Collector Chatbot for UTAR

This project demonstrates his self-taught knowledge in machine learning. Using language models, he developed a chatbot that collects feedback from students, a valuable resource for the university. This project allowed him to integrate machine learning concepts with practical applications, reflecting his interest in artificial intelligence and human-computer interaction.

2. Gesture-Controlled Mouse

In a highly innovative project, Lee Wei Jin created a gesture-controlled system allowing users to operate a computer mouse using hand movements. This system was programmed to recognize specific gestures that could execute actions such as clicking, scrolling, and taking screenshots, showcasing his creativity and proficiency in user-interface design and interaction.

3. Academic Advisor Appointment System

This system allowed students to view advisor schedules and book appointments. Advisors could manage student appointments and access academic information, enhancing communication and efficiency within the academic setting.

4. Visitor Management System

Lee Wei Jin created a mobile app that securely manages visitor access in residential areas. This application featured QR code scanning, an SOS function for emergency alerts, and an announcement feature for area-wide notifications. This project exemplifies his dedication to improving community safety and streamlining administrative processes.

5. Hospital Management System

Designed to assist hospitals in tracking employee and patient information, this system enabled detailed recording of symptoms and diagnoses, making it easier to track patient progress. This project highlighted his understanding of database design and health informatics.

6. Software Engineering Principles (Non-Implementation)
A project on Customer Loyalty and Retention Application that focuses on software engineering principles like requirements analysis, modules block diagram design, system architectural patterns. This projects enhance understanding of the scrum framework, sprint cycle, sprint goals and sprint backlog. Methodologies: MVC Architectural Diagram, Scrum Framework, Block Diagram for modules

7. Analysis and Design of Information System (Payment System) Conducted requirements analysis and system design of a payment system using methodologies for an information system (no implementation). Methodologies: UML, System Design Methodologies, Context Level Diagram, Data Flow Diagram, Logic Modeling (Decision Table)

8. Restaurant Front-End Website A project that focuses on front-end website design. The website has a modern and clean minimalist design with transitions and interactive elements using CSS. The website is equipped with page navigation, HTML and JavaScript forms. Technologies: HTML, CSS, JavaScript, Bootstrap.

9. Server-Side Web Application A simple system built using PostgreSQL and MVC to get and process data from back-end and show it front-end. Technologies: PostgreSQL, MVC framework.

10. Simple Game Mobile Application A simple game where user need to touch the highlighted target within a time limit, there are 5 levels with each level having more target. The high score is kept in a database. The game is developed using Android Studio Technologies: Android Studio, Java, Data Persistence (Shared Preferences),

Personal Qualities and Interests:

An advocate for continuous learning, Lee Wei Jin embraces challenges across different fields to broaden his expertise. His strengths include a keen eye for detail, a passion for self-directed research, and an ability to quickly adapt to new technologies. His problem-solving skills are especially notable in debugging, where he consistently finds efficient solutions by combining his technical knowledge with available online resources.

Despite his technical prowess, he is modest and acknowledges areas where he prefers to work collaboratively rather than lead, a trait that underscores his thoughtful and analytical approach to tasks. Lee Wei Jin's reserved nature complements his methodical work style, making him highly reliable and precise in his contributions to team projects. He thrives in an interactive work environment, valuing open communication and teamwork to achieve shared goals.

His interest in machine learning and recent projects in this domain demonstrate a strong desire to delve deeper into AI and data science, fields he hopes to explore further in his career. Additionally, he has foundational knowledge in programming languages such as C# and VBA, along with experience in .NET, Node.js, and React, all of which equip him for a broad range of technical roles.

Extracurricular and Volunteer Involvement:

Lee Wei Jin's university experience was not limited to academic and technical achievements. His passion for music and performing arts is evident from his participation as a performer in multiple UTAR events, including the International Friendship Society Concert and university convocations. His dedication to his roles in these activities speaks to his versatility and willingness to take on diverse responsibilities outside his field of study.

Additionally, his volunteer work during blood donation campaigns and martial arts events illustrates his commitment to community service. This diverse involvement reflects a well-rounded individual who is not only technically skilled but also compassionate and actively engaged in contributing to society.

Career Aspirations:

Looking forward, Lee Wei Jin aims to build a career in machine learning and software development, where he can integrate his skills in programming, system design, and AI. He is eager to take on new projects that push the boundaries of his technical knowledge, particularly in machine learning applications, human-computer interaction, and intelligent systems. His adaptability, combined with a passion for continual growth, positions him as a valuable addition to any forward-thinking technology team.

Internship Experience at VAT Manufacturing Malaysia Sdn. Bhd.:

During his three-month internship with VAT Manufacturing Malaysia Sdn. Bhd., Lee Wei Jin immersed himself in a dynamic learning environment within the IT department. VAT Manufacturing, part of a global leader in vacuum technology based in Switzerland, provided Wei Jin with hands-on experience and exposure to both technical and organizational aspects essential to industry operations. He worked under the mentorship of Kelvin Kaw, an IT Operation Engineer, where his day-to-day responsibilities ranged from developing software solutions to managing hardware support issues.

This internship allowed Wei Jin to transition from academic life into a structured corporate setting. He adapted to a fixed work schedule, balancing the rigors of full-time hours with the demands of complex projects. While the transition initially required

some adjustment, Wei Jin embraced the challenges, finding fulfilment in the increased learning pace and exposure to real-world applications of his studies.

Project and Technical Responsibilities:

Wei Jin's role involved a diverse array of tasks, allowing him to apply his technical knowledge and gain practical skills across several projects. Some of his major accomplishments included:

1. SFTP Program Development Using C#:

Early in his internship, Wei Jin was tasked with developing a Secure File Transfer Protocol (SFTP) program in C#. This project aimed to automate the transfer of employee attendance files from the company's internal server to an external server. Wei Jin utilized tools such as WinSCP, an FTP client integrated within Visual Studio, to facilitate file transfers securely. His responsibilities involved programming a connection between servers, coding error-checking mechanisms, and implementing an email alert system to notify the IT team in case of transfer failures. Through this project, he sharpened his skills in troubleshooting, learned to manage JSON configurations, and gained experience in using Visual Studio for C# applications. The project underscored his ability to problem-solve effectively, independently learn new programming languages, and employ logical thinking for software development.

2. Inventory Management and Database Development:

Wei Jin played a key role in managing the company's inventory, which was a multi-step task that included recording, organizing, and compiling lists of all items across three inventory rooms. Once the initial inventory was completed, he developed an Inventory Management System database using SQLite. The system included modules for "stock in" and "stock out" transactions and supported reporting functionalities. His supervisor guided him through optimizing his database schema for performance, teaching him valuable insights about efficiency in database design—a skill he can leverage in future projects.

3. Excel VBA Macro Development for Vendor Communication Automation:

Wei Jin was tasked with developing an Excel VBA macro to automate parts of the vendor request-for-quotation (RFQ) process. This macro integrated various Excel

functions to identify vendor emails from a master list, retrieve data on part IDs and quantities, and populate an email template. He designed the macro to generate emails using HTML formatting, creating a user-friendly table within the email body. This project not only expanded his VBA proficiency but also allowed him to streamline a crucial administrative function, demonstrating his adaptability to new programming languages and workflows.

4. Support Roles in Microsoft Dynamics 365 and Daily IT Operations:

Wei Jin learned to navigate Microsoft Dynamics 365, a business management tool for the company's ERP needs, primarily focusing on the human resource management and job card configuration modules. His responsibilities involved adding and updating employee data, configuring access controls, and providing basic technical support for other employees via the ticketing system. Managing support tickets and troubleshooting hardware and software issues strengthened his organizational skills and gave him insights into operational processes within a corporate IT department.

Professional Growth and Adaptation:

Wei Jin's internship experience fostered significant professional and personal growth. While working in a corporate environment, he became adept at adjusting his daily routines to meet the demands of full-time work. He adopted a strategic approach to time management, utilizing downtime to explore self-directed learning, including independent studies in VBA and Excel macros. Wei Jin demonstrated resilience in overcoming challenges, like debugging the SFTP program and understanding new syntax requirements in VBA, which reinforced his adaptability and commitment to continuous improvement.

Collaborative Learning and Self-Reflection:

Throughout his internship, Wei Jin interacted closely with senior developers and supervisors, learning not only technical skills but also valuable insights about teamwork and communication. Frequent weekly meetings allowed him to present his progress and receive constructive feedback. His supervisor's mentorship was instrumental in refining his approach to software development, teaching him to balance functionality with efficiency, especially in database design.

Wei Jin also recognized areas for improvement, such as his tendency to rely on online resources for syntax assistance. To address this, he made a concerted effort to explore more advanced functions and familiarize himself with programming structures independently. This proactive approach to self-learning and skills development underscored his commitment to personal growth and his readiness for challenges in the tech field.

Exposure to Company Culture and Team Dynamics:

The internship exposed Wei Jin to a collaborative and supportive work culture at VAT Manufacturing. He participated in team-building events and departmental meetings, which enhanced his interpersonal skills and strengthened his connection with colleagues. A memorable aspect of this experience was a team-building day at a gel ball shooting venue, fostering a sense of camaraderie and bonding with his team. Additionally, he benefited from insightful discussions with his department's manager, who shared his career journey and provided advice on professional growth, instilling valuable lessons on work ethic and the mindset needed for success in the IT industry.

Conclusion and Career Aspirations:

Wei Jin's internship with VAT Manufacturing Sdn. Bhd. was an invaluable stepping stone, providing him with practical experience, technical skills, and insights into the professional world. This experience affirmed his passion for software development and inspired him to pursue his career goals with renewed confidence. He aspires to leverage the technical, analytical, and interpersonal skills he acquired during this internship to contribute effectively to future projects, particularly in software development and machine learning. By embracing challenges and taking advantage of every learning opportunity, Wei Jin emerged from his internship well-prepared to embark on a successful career in the technology sector.

Final Year Project: Student Satisfaction Survey Chatbot (SSSC)

For his Final Year Project (FYP), Lee Wei Jin undertook the development of a **Student Satisfaction Survey Chatbot (SSSC)** at Universiti Tunku Abdul Rahman (UTAR). This project aimed to improve how the university collects feedback from students by

integrating AI-driven conversation and feedback capabilities. Traditional survey forms often lead to disengagement, yielding low-quality responses, so Wei Jin's project proposed a solution that uses an intelligent chatbot to elicit more genuine and thoughtful feedback from students.

Project Goals and Objectives

The primary goal of the SSSC was to enhance the quality of student feedback through an interactive, conversational format. Wei Jin set out to create a system that could:

- Understand and respond to student feedback effectively, using AI-powered natural language processing (NLP) for meaningful interaction.
- Prompt follow-up questions based on initial responses to encourage students to elaborate on their experiences.
- Implement sentiment analysis to gauge student satisfaction and store responses in a structured database for further analysis.
- Filter out irrelevant or inappropriate feedback to maintain a constructive and respectful interaction environment.

Technical Approach and Methodology

Wei Jin utilized a combination of **Large Language Models (LLMs)** and **Natural Language Processing (NLP)** technologies to bring the chatbot to life. The project architecture included several sophisticated AI components:

1. **Text Generation and Response Model**: The chatbot leveraged a transformer-based LLM to generate human-like responses, ensuring that interactions felt natural and were tailored to the student's feedback. The model enabled the chatbot to generate text responses that prompted students to expand on their answers.
2. **Sentiment Analysis**: By incorporating a sentiment analysis model (trained on feedback data), the chatbot could analyze the emotional tone of each response, classifying feedback as positive, negative, or neutral. This classification allowed the system to sort and prioritize feedback, aiding in a deeper analysis of student satisfaction levels.
3. **Profanity and Language Filter**: Wei Jin integrated tools such as the profanity-filter library and language detector to manage the quality and relevance of responses. These filters ensured that the chatbot maintained a respectful environment and reduced inappropriate or irrelevant input, thereby enhancing data quality.

4. **Question Detection**: Wei Jin employed a question detection model to discern between feedback and questions, as the chatbot was designed to gather feedback rather than provide answers to student inquiries.

Implementation Challenges and Problem-Solving

Wei Jin encountered various challenges throughout the project, particularly in configuring the LLM to operate efficiently within the constraints of available hardware. The original model demanded extensive memory, so Wei Jin opted for a quantized version of the LLM, balancing system performance and response accuracy. This innovative solution demonstrated his problem-solving skills, resourcefulness, and ability to adapt AI models to meet project-specific needs.

Additionally, Wei Jin encountered limitations in the chatbot's ability to generate concise, meaningful responses without excessive prompts for details. He refined the chatbot's prompt configurations to ensure that it asked appropriate follow-up questions without overwhelming the user. This process required meticulous attention to detail, as he adjusted model parameters to achieve an optimal balance between interaction depth and response relevance.

User Experience and Interface Design

Wei Jin's project was not only technically complex but also user-centered. He designed a front-end interface accessible to students via a web-based chat platform. This interface allowed students to engage with the chatbot in an intuitive and accessible way, enhancing the likelihood of meaningful interactions. Wei Jin implemented features to guide students through the feedback process and reassure them about data privacy, preserving the anonymity of their responses, which helped foster a trusting and open interaction environment.

Evaluation and Outcomes

The final SSSC system was evaluated on its ability to collect high-quality, detailed feedback, address limitations of traditional survey forms, and encourage authentic student input. Early testing indicated that the chatbot could effectively elicit detailed responses and maintain a respectful tone, meeting the objectives of reducing survey fatigue and increasing response quality.

By creating a novel AI-driven feedback system for educational settings, Wei Jin demonstrated his capability to:

- Apply advanced AI and machine learning principles to solve real-world problems.
- Independently configure and optimize large language models for domain-specific tasks.

- Understand the nuances of user experience in conversational AI design.

Conclusion and Future Potential

Wei Jin's SSSC project showcased his technical expertise, adaptability, and focus on impactful, user-centered solutions. With experience in deploying and customizing complex language models, he has developed skills that make him well-prepared for roles in AI and machine learning. His ability to manage challenges and refine AI applications will serve him well in environments that value innovation, practical solutions, and technical excellence.