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ASSIGNMENT

LEVEL 5

COMP50001 : Commercial Computing

COM2461

CB015790
Nethmi Randeesha Walawe Palliyaguruge

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1. Introduction

This report outlines my career development plan as I aim for a career in Software Engineering. It details the skills I have, areas I need to improve, and the strategies I will use to reach my career goals. The assignment starts with a skill matrix based on the STARR technique. This matrix shows my employability skills and experiences. Next, I conduct a SWOT analysis to identify my main strengths, weaknesses, opportunities, and threats. I then break down my career goals into short-term, medium-term, and long-term objectives, along with a specific action plan. One of the short-term milestones is completing a LinkedIn certification. I include a skills audit and reflection to compare my current skills with what the industry needs. This helps me identify the gaps I must close to moving from an internship to senior roles. Finally, I provide supporting documents such as my CV, LinkedIn profile, and job descriptions. These demonstrate how my personal and professional growth meets the expectations of the IT industry.

2. Skill Matrix based on STARR technique

2.1 STARR Technique

Q1: Describe a time when you were faced with a problem and what you did to solve it

SITUATION

For my NCCS assignment, I had to build and configure a network within 5 days before submission. I had already completed about 90% of the work and decided to show it to the lecturer to confirm if it was correct. He pointed out some changes that looked small but actually required reconfiguring many parts of the network.

TASK

I needed to make those changes across the whole configuration and also complete the remaining 10% of the assignment, which I had no clear idea how to do.

ACTION

I carefully reconfigured the network based on the lecturer's feedback, even though it required a lot of time and adjustments. For the final 10%, I asked a friend for help. He taught me the basics of the part I didn't understand, which gave me clarity. After that, I did my own research to deepen my understanding and applied it to complete the assignment.

RESULT

I was able to finish the assignment before the deadline and received high marks for it.

REFLECT

This experience taught me the value of asking for help when needed and then building on that knowledge with my own research. I also realized the importance of checking work with lecturers early so there is enough time to make changes without last-minute stress.

Q2: Describe a situation where you used your leadership skills and initiative to take control

SITUATION

Last semester, I initially joined one student's group for a module but later faced pressure from him to break my confirmed group in another subject (DT) in exchange for including my friend in his group. When I refused, the situation became uncomfortable, and I decided to leave his group.

TASK

I had to quickly form my own group for the SDAM module, even though I was not confident in C#, which the assignment required.

ACTION

I found a teammate skilled in C# and invited others who were willing to learn. I created a clear task structure, assigning roles based on strengths, and facilitated learning sessions with the C#-skilled member helping the rest. I also guided the group's progress and kept everyone on track.

RESULT

Despite the rocky start and my initial fears, our group successfully completed the assignment and submitted on time. I learned a lot about C#, and the team felt supported and confident.

REFLECT

This experience taught me that leadership isn't about knowing everything, it's about bringing together the right people, creating structure, and motivating the team. Next time, I would be less hesitant to take the lead, even in areas I'm less skilled in.

Q3: Give an example of how you made a positive contribution to a team and what the outcome was

SITUATION

During a team assignment, one member was struggling with personal issues and couldn't focus, while another member was unresponsive and failed to complete their tasks despite promises.

TASK

As the group leader, I needed to ensure the assignment was completed on time, support the member facing personal challenges, and manage the uncooperative member's impact on the team.

ACTION

I provided emotional support to the member facing personal issues, helping her manage her stress and complete her part of the assignment. For the uncooperative member, I attempted to guide and encourage him to contribute, but when that didn't work, I took responsibility for completing his portion to avoid jeopardising the project. I also coordinated the rest of the team, keeping everyone on track and ensuring communication was clear.

RESULT

Despite the difficulties, the assignment was completed successfully and submitted on time. The team member facing personal challenges managed to contribute effectively after support, and the project achieved the intended results. My efforts ensured the team met deadlines and maintained quality.

REFLECT

I learned the importance of supporting teammates emotionally, taking initiative, and stepping up when others don't contribute. I also realised the value of clear communication and contingency planning in team projects. If I faced a similar situation again, I would set clearer expectations earlier and monitor progress more proactively.

Q4: Describe a time when you had several tasks to complete and what plans you made to ensure you completed them effectively?

SITUATION

Last semester, I had two in-class tests and three group assignments to prepare for at the same time. Out of the three group projects, I was the leader for two. During this period, my father suddenly fell ill, and since my mother, who is a doctor, was caring for him at the hospital, so I also had to manage household responsibilities such as preparing meals alongside my academic work.

TASK

I needed to complete my own exam preparations, lead my groups effectively, and still handle responsibilities at home, without letting any side suffer.

ACTION

I created a strict schedule, allocating study hours for my in-class tests and setting milestones for each group assignment. For my groups, I broke tasks into smaller parts and assigned them clearly to members, while regularly checking progress. I focused on high-priority tasks first and used early mornings and late evenings for uninterrupted study. Despite my personal situation, I maintained communication with my teammates and kept them motivated.

RESULT

I successfully prepared for both in-class tests and performed well, while also ensuring all three group assignments were submitted on time. At home, I managed to support my family, and everything was balanced without affecting the outcomes.

REFLECT

This experience taught me the importance of discipline, time management, and prioritisation when handling multiple responsibilities. I also realised that even under pressure, planning and clear organisation can help achieve success. In the future, I would delegate smaller tasks even earlier to reduce stress.

Q5: Describe a time when you were faced with a difficult decision and how you decided what to do

SITUATION

Before my Advanced Level examinations, I realized I wasn't performing as well as I hoped in the biology stream. While my parents, both doctors, expected me to follow a medical career, my real passion was in the IT field. I had enjoyed ICT during my O/L studies and was further inspired by my brother, who was already in the IT field.

TASK

I needed to decide on my career path and convince my parents to accept my choice, while respecting their feelings and expectations.

ACTION

After receiving my A/L results, I openly explained to my parents that I wanted to pursue IT. I highlighted my genuine interest, past achievements in ICT, and the opportunities in the field. At first, my mother was heartbroken and my father quietly disappointed, but I stayed calm and persistent. I also sought support from my father's friend, who spoke to them and helped them understand my perspective.

RESULT

Over time, my parents accepted my decision, and now they are happy to see me thriving in the field I love. Even when I face stressful moments in assignments, my mother acknowledges that I am working hard — but I can respond with confidence that I'm happy doing what I'm passionate about.

REFLECT

I learned the importance of self-awareness and standing by my decisions while communicating respectfully. I also realized that persistence, combined with logical explanation, can help others understand your choices. If I faced a similar decision again, I would still choose the same path and approach the conversation with the same honesty.

2.2 Skill Matrix

Employability skills

	Network Reconfiguration Challenge	Taking Charge in C# Project	Balancing Team Struggles	Managing Studies and Family	Choosing IT Over Medicine
	1	2	3	4	5
Teamwork	1	2	3	4	5
• Contribute to discussions and share ideas		☒	☒		
• Compromise your ideas based on team decisions				☒	
• Complete tasks by agreed team deadlines					
• Share progress with team members	☒	☒	☒		
• Attend team meetings		☒	☒		
• Encourage and inspire fellow team members		☒	☒		
• Help team members			☒		
• Understand and respect team members behaviours, actions and responses (emotional intelligence)				☒	
Leadership	1	2	3	4	5
• Take responsibility for a task	☒	☒	☒		
• Manage a team or project		☒			
• Assign and delegate tasks		☒			
• Supervise, manage, coordinate		☒	☒		
• Teach, train or instruct	☒	☒			
• Set deadlines		☒			
• Initiate, lead, be a pioneer	☒	☒			
• Motivate and inspire		☒	☒		
Interpersonal skills	1	2	3	4	5
• Persuade and sell					☒
• Influence					☒
• Negotiate and resolve conflicts			☒		
• Advise			☒		
• Help people link up or connect			☒		
• Raise people's self-esteem and motivate			☒		
• Serve, care for, help				☒	
• Offer good customer service					
• Convey warmth and empathy			☒	☒	
Communication	1	2	3	4	5
Written	☒	☒		☒	
• Reports					
• Essays					

• Emails/letters					
• CV					
• Use spell/grammar check					
• Construct an argument					☒
• Legal documents					
• Technical documents					
Verbal					
• Speak clearly and concisely		☒			☒
• Tailor message to the audience					
• Ask good questions, interview, draw out information	☒				
• Deliver presentations to groups					
• Actively listen and respond to others			☒	☒	
• Divert, amuse, entertain, perform, act					
Organisation skills	1	2	3	4	5
• Prioritise workload				☒	
• Set goals				☒	
• Manage your time				☒	
• Manage competing demands					
• Meet deadlines	☒	☒		☒	
• Meet targets				☒	
• Accommodate additional, unexpected tasks					
• Use a time management tool – eg MS Outlook					
• Create a Gantt chart					
• Follow instructions faithfully	☒				

Thinking skills

Problem solving and decision making	1	2	3	4	5
• Take a logical and analytical approach	☒	☒	☒		
• Analyse, break down into parts		☒			
• Create, innovate and invent					
• Design, use artistic abilities, be original					
• Visualise					
• Imagine and envision					
• Develop, improve					
• Make decisions					☒
• Produce a solution		☒			
• Be curious (questioning mindset)					☒
Enterprise and entrepreneurialism	1	2	3	4	5
• Anticipate potential problem and adapt (enterprise)				☒	
• Use your initiative	☒	☒			☒
• spot gaps in the market and innovate					
• work independently				☒	☒
• have original ideas		☒			☒
• Trying something new					☒
• Improving a process to increase efficiency or boost results	☒	☒			
Data	1	2	3	4	5
• Research					
• Data analysis					
• Data cleansing					
• Pattern spotting					

• Generating reports					
• Reading a lot of information from various sources					
• Weighing up the merits of different arguments					☒
• Creating a compelling argument based on evidence					☒
• Compile, keep records, file, retrieve					
• Work with numbers, compute					

Technical skills

	1	2	3	4	5
• Make, produce, manufacture					
• Examine, inspect, compare, see similarities and differences					
• Study, observe					
• Repair					
• Set up, assemble					
• Use specialist equipment					
• Use specialist software					
• Use specialist techniques					
• Use programming languages		☒		☒	
• Use Microsoft Office	☒	☒			
• Speak languages					
• Assess, evaluate, treat					
• Construct					
• Shape, model, sculpt					
• Operate, drive					
• Treat, cure					
• Play an instrument					
• Create software		☒			
• Create games					
• Animate					

Personal skills

	1	2	3	4	5
• Confidence		☒			☒
• Resilience	☒			☒	
• Willingness to learn	☒	☒			
• Positive attitude			☒	☒	
• Perseverance and motivation				☒	☒
• Ability to work under pressure and handle stress				☒	
• Adaptability/flexibility	☒			☒	
• Professional behaviour		☒			

3. SWOT Analysis

3.1 Strengths

- Strong leadership skills
- Good time management under pressure
- Problem-solving and ability
- Effective communicator and supportive teammate
- Resilient and adaptable in difficult situations

3.2 Weaknesses

- Still developing confidence in delivering presentations — sometimes feel less comfortable speaking in front of a crowd.
- Tendency to take on extra workload when team members underperform, which can cause stress.
- Limited exposure to some technical areas (e.g., cloud, testing frameworks). Once I learn a new skill, I am confident applying it, but I need to broaden my knowledge base.
- Leadership is improving, but I am still learning to handle bigger teams and higher responsibilities.

3.3 Opportunities

- University group projects give opportunities to apply and strengthen leadership, teamwork, and communication skills.
- Presentations in viva's improve public speaking confidence.
- Guidance from lecturers, mentors, and peers helps in building technical and professional confidence.
- Growing IT industry with many career opportunities.
- Free online resources like (LinkedIn Learning, Coursera, Udemy) and hackathons to expand technical knowledge and stay updated.

3.4 Threats

- High competition in IT internships and graduate roles, requiring strong technical and soft skills.
- Team conflicts or uncooperative members may increase workload and stress.
- Rapidly changing technologies (frameworks, cloud, DevOps) can be a challenge if continuous learning is not maintained.
- Presentation anxiety could affect performance in interviews and professional settings.
- Health condition (sinusitis) may sometimes make it difficult to work long hours in front of screens if not managed carefully.

4. Career Goals

4.1 Short Term Goals

- Finding internship in Software Engineering Intern at WSO2 by 2026 July
- Accomplish the requirements as a Software Engineering intern
- Get maximum marks as much as possible for assignments

4.2 Medium Term Goals

- Complete my degree BEng (Hons) in Software Engineering with a 1st class by 2027
- Getting a job as associate/ junior Software Engineer

4.3 Long Term Goals

- Work as a senior position while getting more promotions
- Start to build my own business while doing my job

5. Skill Requirement & Skills Audit

Category	Skill	Link	Skill Level (0-5)
Academic	Enrolled in Bachelor's degree in Computer Science/Engineering (min. 2 years study)	Appendix 1 Appendix 2 Appendix 3	3
	6 months – 1 year experience in Software Engineering.	Appendix 2	0
	Bachelor's degree + 4+ years' industry experience	Appendix 3	1
Technical	Strong grasp of software engineering principles (OOP, data structures, algorithms, design patterns, version control, testing)	Appendix 1	3
	Proficiency in programming languages (Java, C#, .NET, Python)	Appendix 2	2
	Advanced coding, system design, architecture, and scalable app development	Appendix 3	3
	Cloud technologies (AWS, Azure, Salesforce, CI/CD pipelines)	Appendix 2 Appendix 3	1
	Databases (SQL, NoSQL, MongoDB)	Appendix 2 Appendix 3	3
	Automation & testing frameworks	Appendix 2 Appendix 3	2
Professional	Communication (written, verbal, reporting, collaboration)	Appendix 1 Appendix 2 Appendix 3	3
	Teamwork & collaboration in multicultural Agile/DevOps teams	Appendix 1 Appendix 2 Appendix 3	4
	Problem-solving & analytical reasoning	Appendix 1 Appendix 2 Appendix 3	4
	Adaptability, willingness to learn new tools/technologies	Appendix 1 Appendix 2	4
	Leadership & mentoring juniors	Appendix 3	4
	Project/Task management, meeting deadlines	Appendix 2 Appendix 3	4

Table 1: Showing skill requirements linked to job descriptions

6. Skills Audit Reflection

• Bachelor's Degree in Software Engineering

A Bachelor's degree in Software Engineering is essential for getting an internship and later Associate Software Engineer roles. This qualification lays the groundwork for understanding programming, databases, the software development life cycle, and problem-solving methods. I am currently pursuing my BSc (Hons) in Software Engineering at APIIT, which is affiliated with Staffordshire University, and I aim to graduate with First Class honors. Successfully completing this degree is important because it gives me the academic background, I need to meet industry standards and move toward senior-level positions.

• Programming Skills (C#, Java, Python, JavaScript)

Being skilled in programming languages is important for creating software solutions. I currently have hands-on experience in C#, JavaScript, and Python through academic projects. These projects include developing a Conference Management System and a Hospital Management Web App. However, I need to improve my understanding of advanced coding practices like design patterns, debugging, and optimization. To tackle this, I plan to create three more GitHub projects before my internship and practice coding challenges based on algorithms on platforms such as LeetCode and HackerRank.

• Cloud Computing (AWS / Azure)

Cloud technologies are now necessary in almost every Software Engineer job description, especially for medium- and long-term roles. Currently, my experience with cloud computing is limited. To get ready for my internship, I plan to finish the AWS Cloud Practitioner certification by 2026. This will provide me with knowledge of cloud platforms, CI/CD pipelines, and deployment. Obtaining this certification early will help me stand out from other internship candidates and prepare me for Associate and Senior roles where cloud skills are essential.

• Databases (SQL / NoSQL / MongoDB)

Database management is an important skill for any software role. I have experience with SQL and MySQL from my coursework, but I need to learn more about NoSQL databases like MongoDB. By working on database projects and linking them with my GitHub applications, I will build my confidence in using both relational and non-relational databases. These skills are often requested in Associate and Senior job postings.

• Testing & Automation

Testing ensures the quality and functionality of software. It becomes more important at the Associate Engineer and Senior levels. Right now, my experience is mostly with manual testing during assignments. I plan to learn automation frameworks like JUnit or Selenium before my internship. Completing at least one course on software testing from Udemy or LinkedIn Learning will help me build this skill and prepare for future roles that require both manual and automated testing knowledge.

• Communication Skills

Strong communication skills are important in Software Engineering, as teamwork, presentations, and discussions with stakeholders are part of daily tasks. I communicate well in small group discussions, but I am still working on my confidence for formal presentations. University vivas and presentations offer chances to practice. To improve further, I plan to join workshops, volunteer to present in group projects, and possibly join a public speaking club like Toastmasters. This will help me manage nervousness and do better in interviews and client-facing roles.

• Leadership & Teamwork

Leadership is one of my strengths that is developing. I have already shown I can form and lead project groups, such as in the C# project. I delegated tasks, motivated my teammates, and made sure we finished on time. However, I am still learning to lead bigger teams with different skills. University projects, hackathons, and internships will provide a good opportunity to enhance these skills. I also plan to take short courses in Agile and Scrum methods to help me move into senior roles and, eventually, project management.

7. Action Plan

No.	Goal to be achieved	Action Required	Success criteria	By When	By whom
1	To secure an internship at IFS by end of July 2026	1. To complete 3 projects for my GitHub portfolio 2. Create a CV and get feedback from industry liaison 3. Apply to at least 15 internship positions by June 2026 4. Participating in networking events 5. Attend at least one career fair before July 2026	Getting an internship	2026	Myself
2	Complete a LinkedIn Learning certification (Prompt Engineering / Python for AI/ML)	1. Complete online courses and exam 2. Upload certificate to LinkedIn profile	Certification completed and added to LinkedIn profile	2025	Myself
3	Improve technical confidence (programming & cloud)	1. Complete AWS Cloud Practitioner 2. Strengthen Java/C#/Python 3. Practice SQL & MongoDB 4. Learn one testing framework	Completed AWS Cloud Practitioner certification and uploaded at least 3 technical projects to GitHub portfolio.	2027	Myself
4	Complete degree with strong results	1. Focus on coursework 2. Maintain GPA for 1st Class	Graduate with 1st Class	2027	Myself
5	Secure a job as an Associate Software Engineer	1. Applying for jobs / getting promoted in the same company where I did my intern 2. Highlight internship experience 3. Strengthening interview & coding test skills 4. Creating my own portfolio website with the projects I have completed as a intern	Securing my job		Myself
6	Work as a project leader	1. To lead a project within the workplace 2. Strengthening my knowledge	Project has been led	2030	Myself

Table 2: Action plan describing steps required to succeed with career plan

8. CV & LinkedIn Profile

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LinkedIn: linkedin.com/in/nethmi-palliyaguruge | GitHub: github.com/nethmipalliyaguruge

SUMMARY

Software Engineering student with hands-on experience in web and mobile app development. Skilled in HTML, CSS, JavaScript, C#, and Flutter with strong problem-solving and teamwork abilities. Currently pursuing a BEng (Hons) in Software Engineering at Staffordshire University (APIIT Sri Lanka). Seeking an internship to apply technical skills and gain industry experience.

EDUCATION

BEng (Hons) Software Engineering **2024**
Staffordshire University UK

G.C.E Advanced Level - Biology Stream (CCS) **2020 - 2023**
Musaeus College, Colombo 07

G.C.E Ordinary Level **2010 - 2020**
Musaeus College, Colombo 07

PROJECTS

Hospital Management Web App (2024)

- Developed a responsive hospital website using HTML, CSS, and JavaScript.
- Optimized for accessibility and performance (95% Lighthouse score).
- Implemented Progressive Web App (PWA) features and animations.

Conference Management System (2025)

- Led a team in designing and developing a Conference Management System using C#.
- Assigned tasks, coordinated progress, and implemented core functionalities.
- Improved teamwork and leadership through collaboration.

ACADEMIC & VOLUNTEER EXPERIENCE

Hackathon Participant – Mini Hackathon V1 (2025)

- Participated in a team hackathon, developing a prototype under time constraints.
- Enhanced problem-solving, collaboration, and rapid prototyping skills.

SKILLS

- **Programming Languages:** Python, C#, JavaScript, Dart
- **Web Development:** HTML, CSS, Tailwind, PHP
- **Frameworks & Tools:** Flutter, MySQL, Git/GitHub, Packet Tracer
- **Soft Skills:** Problem Solving, Teamwork, Presentation, Leadership

LANGUAGES

- English
- Sinhala

REFERENCES

Dr.Mrs A.P.N. V. De Vas Gunawardena
Medical Officer Radiology
National Hospital Sri Lanka +94777901521

LinkedIn : https://www.linkedin.com/in/nethmi-palliyaguruge/

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10. Appendices

Appendix 1

IFS is seeking an **Undergraduate Trainee in Software Engineering** to support ongoing development projects while gaining hands-on industry experience. This internship role provides the opportunity to work in a dynamic and collaborative environment, contributing to software design, testing, and development tasks. Trainees will apply core software engineering principles and actively engage in learning new tools, frameworks, and programming languages.

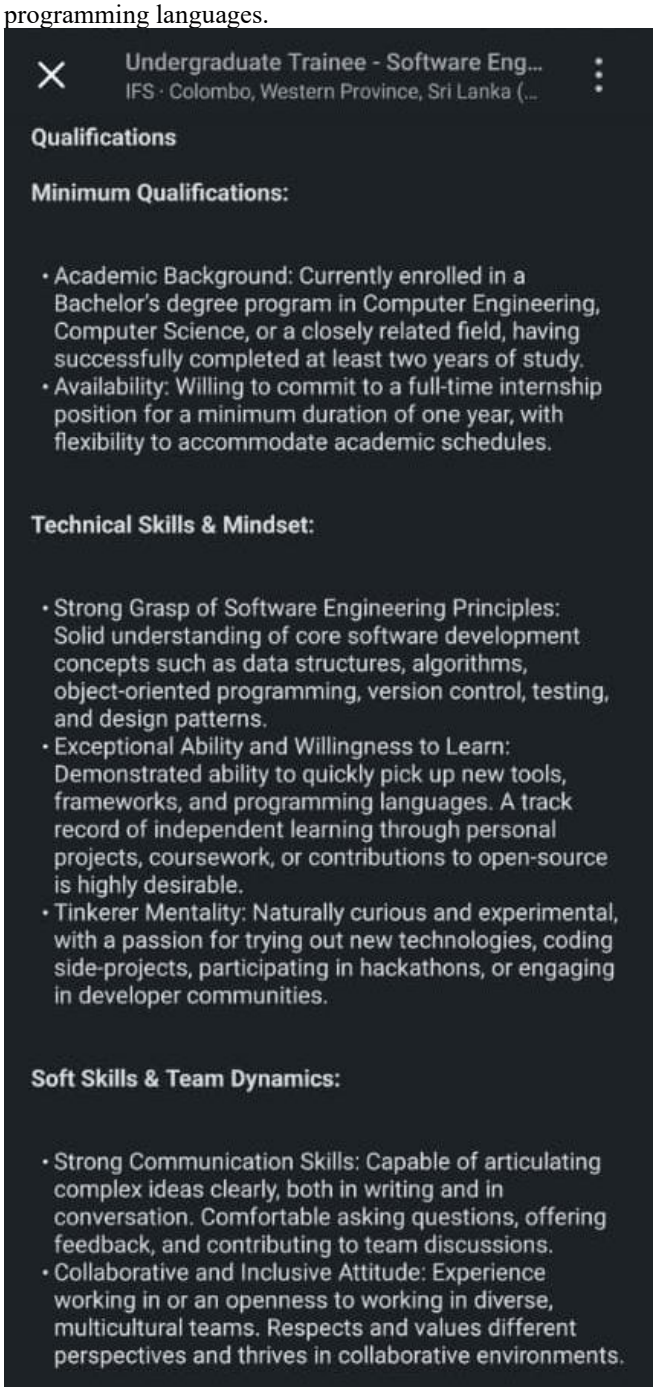

Figure 1: Internship

Appendix 2

Pearson is seeking an Associate Software Engineer to contribute to the design and development of internet-scale applications. The role involves building and maintaining high-quality applications across private and public cloud platforms, architecting solutions using industry best practices, and ensuring compliance with security and accessibility standards. Responsibilities also include automating functional and quality tests, enabling continuous integration and deployment (CI/CD), improving system observability, and monitoring performance to deliver optimized and secure applications.

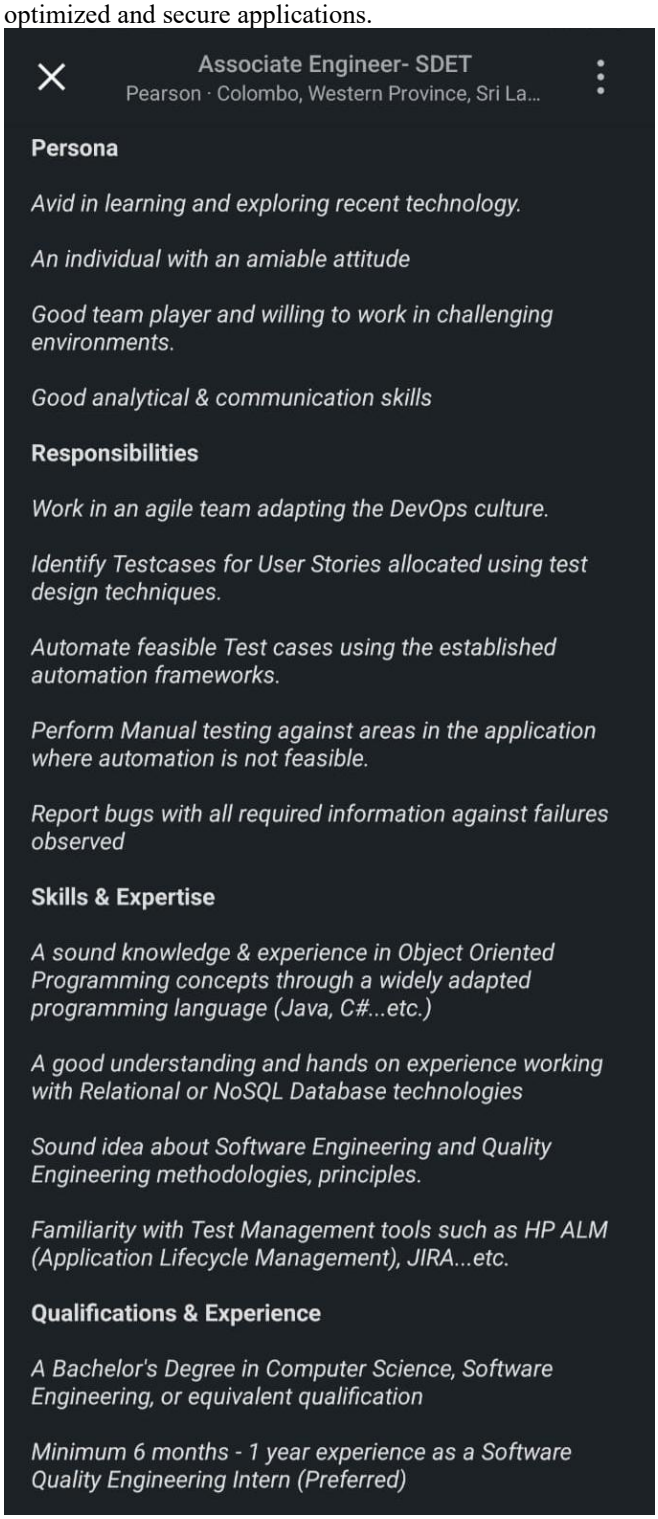

Figure 2: Associate Software Engineer

Appendix 3

Pearson is seeking a Senior Software Engineer to design, develop, and maintain internet-scale applications while supporting them throughout their lifecycle. The role focuses on building high-quality software applications on private and public cloud platforms, architecting scalable solutions, and applying industry best practices. Key responsibilities include improving application security, ensuring compatibility and accessibility, automating testing, integrating CI/CD pipelines, embedding observability, and monitoring performance for continuous optimization.

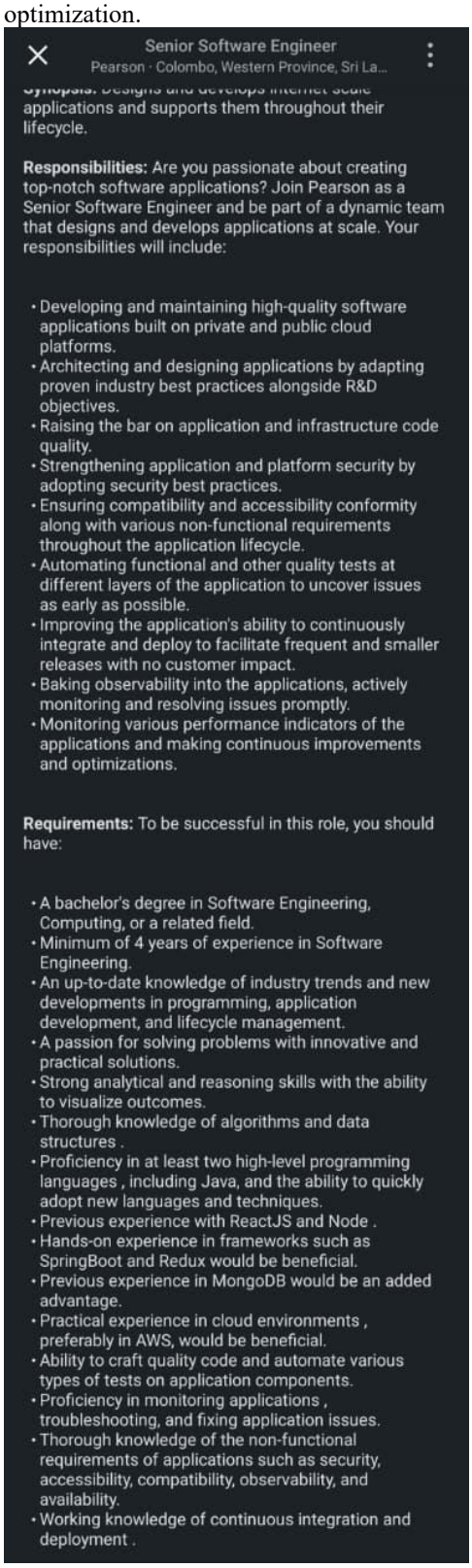

Figure 3: Senior Software Engineer