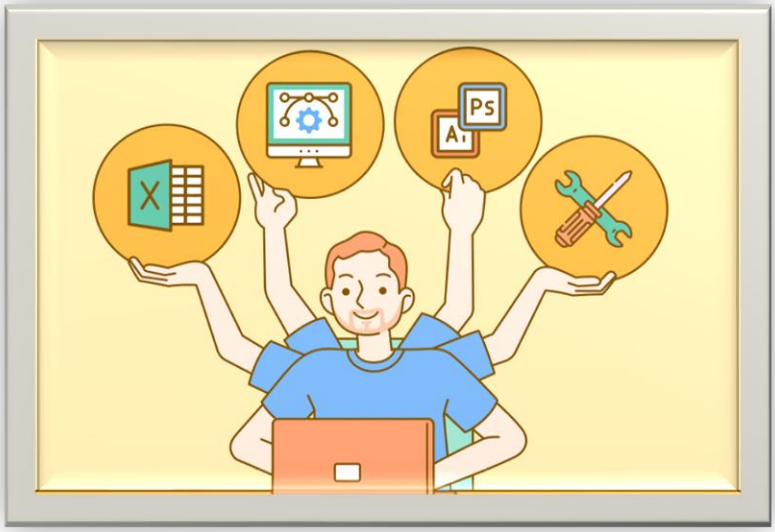
FACULTY OF COMPUTING
UTM Johor Bahru

ASSIGNMENT 3: ACADEMIC WRITING (INDUSTRY TALK 2)
TECHNOLOGY & INFORMATION SYSTEM (SECP1513-05) 2024/2025 SEMESTER 1




# SKILLS IN UNIVERSITY AND INDUSTRY

***Topic covered in this report:***

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2. *Speaker's Experience (Encik Hakimi & Encik Nik)*
3. *Basic Skills Required for Computer Science*
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# INTRODUCTION

An industry talk was held on 17 December 2024, at 8.00 AM at Bilik Kuliah 1, N28, Faculty of Computing. Encik Nik Mohd Habibullah, CEO of Micro Semiconductor Sdn. Bhd. and Encik Mohd Hakimi Iqmall, IT Officer of UTM Digital, were the two guest speakers at the event. This report gives a short overview of the talk session given by the two speakers about their experience in the industry to educate students on the skills required in university and by the industry.

# SPEAKER'S EXPERIENCE

Encik Muhammad Hakimi Iqbal

*(IT Officer @ UTMDigital)*

Mohd Hakimi Iqmall is a skilled system analyst and project manager at UTMDigital. In 2014 to 2018, he pursued his studies at UTM Johor Bahru, where he graduated with a Bachelor of Science in Computer (Graphic and Multimedia). Mohd Hakimi has worked for several companies over his career, including UTM Research Computing, Okakichi Sdn Bhd, and ME Tech Solution. He worked as a game animator at Okakichi, where he helped create the game "Kingdom Ran." He was a System Programmer at UTM Research Computing, where he worked on research and development systems such as ICESys and RADIS 4.0.

In IT, Encik Hakimi highlighted the importance of combining technical and management skills. Mastering programming languages, solving problems, utilizing version control systems and being knowledgeable about development tools for coding, testing and deployment are all essential technical abilities. In terms of management, he emphasized communication, problem-solving and familiarity with SDLC techniques such as Waterfall and Agile. To lead projects, ensuring system performance, and coordinate activities across teams, effective leadership and teamwork are important.

Encik Nik Mohd Habibullah

*(CEO @ Micro Semiconductor Sdn. Bhd.)*

Encik Nik's career demonstrates a strong commitment to innovation and professional growth. Early in his IT career, he was entrusted with creating a video montage for the debut of a digital library, a responsibility that arose after his third year internship at AMAN Malaysia. During his internship, he presented AI-driven solutions to improve library operations, identify inefficiencies and implement advanced cataloging techniques. These efforts showcased both his technical skills and leadership qualities. His involvement in student organizations also helped him develop organizational and teamwork abilities.

Professionally, Encik Nik has worked with NI Solution, Micro Semiconductor Sdn. Bhd. and DatSINI (in partnership with UKM), where he developed innovative enterprise solutions. His ability to seamlessly transition between government and private sectors highlights his adaptability. Notable achievements include the 2019 launch of GetMe Hired, a platform empowering fresh graduates with market-ready infographic CVs, and a 2014 project creating a portable dialysis system powered by a power bank. Currently, his focus is on enhancing financial assessment systems and developing career modules on entrepreneurship and sustainability.

# BASIC SKILLS REQUIRED FOR COMPUTER SCIENCE

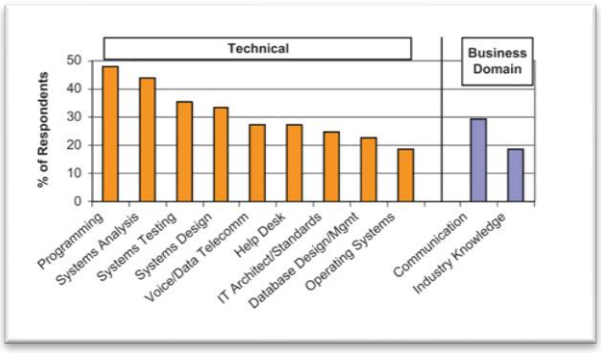


***Figure 1.*** *Top entry-level skills desired by the employers (Suhaimi et al, 2012)*

Employers seek entry-level skills in programming, system analysis, system testing, design, IT architecture, database management and operating systems, along with communication and industry knowledge.

Key skills for success in computer science include programming, critical thinking and a solid understanding of data structures and algorithms, which are fundamental for efficient problem-solving (Abraham et al., 2006).

Proficiency in programming languages like Python, Java and C++ is crucial for application development. Analytical and problem-solving skills are vital for breaking down complex challenges, while effective communication and teamwork are essential for collaboration and explaining technical concepts to non-technical audiences. Additionally, technical writing enhances clarity and ensures cohesive project completion. In a rapidly changing field, staying current with advancements in cybersecurity and artificial intelligence is essential. Students can prepare for a successful career by mastering these skills and practicing them through coding platforms and real-world projects (Pace, 2024).

# BASIC SKILLS REQUIRED BY INDUSTRY

Technical skills were the most desired in new hires (Abraham et al, 2006). But in the IT industry, a blend of technical and management skills is essential for professional success. On the technical side, proficiency in programming languages such as C++, C# and Python, along with a strong understanding of logical fundamentals and version control using GitHub and GitLab, is crucial. Familiarity with development tools like VS Code and Sublime, knowledge of database structures, debugging systems and security awareness for vulnerabilities such as XSS and CSRF are highly valued. Additionally, skills in system frameworks like .NET, Laravel and Yii are important. On the management side, problem-solving, effective communication skills, knowledge of the SDLC, testing and QA skills, risk management, documentation and reporting are vital. Leadership and team collaboration are equally important, as a good leader fosters harmony and motivates subordinates to achieve excellent results. These comprehensive skills ensure adaptability and efficiency in a dynamic industry. Clearly, the combination of both "soft" and "hard" skills will be needed (Aasheim et al, n.d.).

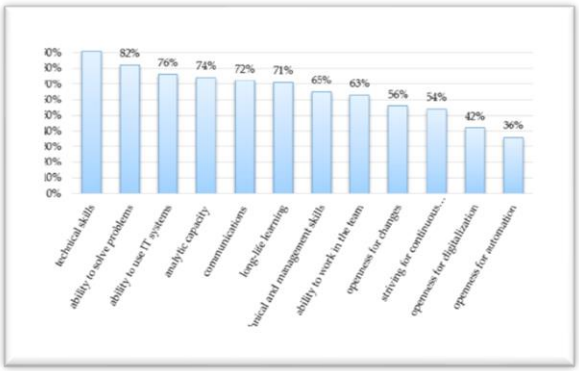


***Figure 2:*** *Required skills for industrial employees (Saniuk et al., 2021)*

# INDIVIDUAL REFLECTIONS

ADAM – To succeed in computer science, I'll focus on developing soft skills like critical thinking, teamwork, flexibility, and communication. I'll also gather my knowledge about the industry I'm going to dive into. Together, these will help me innovate and work effectively in this rapidly changing field.

AFIQ – Over the next four years, I will focus on learning skills like programming, problem-solving and algorithms. By practicing coding regularly, working on personal projects, and gaining internship experience, I'll engage my skills with real-world applications.

AIMAN – To prepare for my future in ethical hacking, I'll focus on learning programming, communication, and teamwork. I'll develop responsible hacking skills and enhance my management abilities. By balancing technical expertise and soft skills, I'll build a successful and well-rounded career.

HAZIM – In the next four years, I'll enhance my programming skills and enhance my communication and teamwork abilities. Developing critical thinking and problem-solving skills will help me solve real-world challenges and succeed in the computer science industry.

PRAVEIN – Over the next four years in computer science, I'll focus on sharpening my technical abilities, including programming and mastering languages like Python and C++. I'll also develop essential soft skills like communication and time management. Additionally, I'll enhance my critical thinking and problem-solving abilities for future work.

# CONCLUSION

To conclude, the industry talk emphasized the critical skills required in both university and the industry to ensure graduate success. Encik Mohd Hakimi and Encik Nik highlighted technical skills such as programming, system analysis, debugging and proficiency in languages like Python and C++. Same as management skills like communication, problem-solving and teamwork are equally important. By combining these skills enables adaptability, leadership, and innovation, important for thriving in the rapidly evolving IT field.

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