ACADEMIC WRITING

SKILLS IN UNIVERSITY AND INDUSTRY

Technology and Information System

SECP1513

MUH KHAIRIL MURSYAD (A24CS4028)
LIANG TIANQI (A21EC3057)
HUANG YINGKAI (A24CS4016)
MOHAMAD ADRIAN (A24CS0268)
LIU YUEHUE (A24CS4019)

Lecturer :
DR. HASWADI HASAN

Faculty of Computing
Universiti Teknologi Malaysia

2025

Technology continues to advance at a very fast pace making it very difficult for the university to keep up with industry requirements. Though the universities create a strong theoretical basis, the industries require professionals who can utilize those skills to solve problems at the ground level. Fixing this gap means combining academic knowledge and skills needed in the industry to give graduates what they need to work in the field.

Speaker: Mr. Nik Mohd Habibulloh

The willingness to learn and adapt is what Mr. Nik Mohd Habibulloh emphasised throughout his career. His career started in 2017 at ME-Tech Solution Sdn Bhd, where he gained practical experience dealing with technical requirements. In 2018-2019, he broadened his horizons at Okakichi Sdn Bhd and worked on various projects allowing him to solve problems and adapt accordingly. Between 2019 and 2021, under his UTM Research Computing role, he bridged the gap between academia and practicality in research. Currently, he is with UTMDigital (2021-present), where his work assumes a digital and technology-centric perspective. His career exemplifies the importance of continual learning and having a variety of tools in one's toolbox in this field.

We need a new generation of software engineers! To solve various problems, one needs to be comfortable with using programming languages such as C, C++, C#, Python, Java, PHP, etc. Common knowledge of the version control tools GitHub and GitLab enable the collaborative aspect of development. Tools like Visual Studio, VSCode, and Sublime serve as aids in coding, while familiarity with database constructs (tables, keys, indexes, relationships, schemas) is crucial for effective data handling. On the other hand, debugging and security awareness involve knowing what went wrong and protecting the system from attacks like SQL injection and cross-site scripting. Analytical and logical thinking, especially regarding algorithms and data structures, makes sure that efficient solutions are developed. Further, any exposure to system frameworks like .NET, Laravel, Yii extends the range of project possibilities in a multitude of different fields.

Various sectors require a balance of hard skills and soft skills. Problem-solving skills are in high demand, particularly when it comes to dealing with fast-changing technology. Collaboration with people in cross-cultural teams requires good communication skills and teamwork. Knowing how to navigate and manage cyber systems is a valuable skill fleet-wide. Skills such as project management (planning, leadership) ensure effective project execution. Graduates thus have the tools to make an impact on industry innovation and success.

It will take collaboration to bridge the gap between what universities impart and what industry demands. Universities need to revise curriculums with respect to industry movements and must provide learners with internships for hands-on experience. Industry partners can offer workshops, guest lectures, and real-world projects. Moreover, the inclusion of soft skills training ready students for workplace dynamics. These initiatives ensure that graduates have both technical and soft skills required to be successful in the industry.

Reflections: Our Journey into Computer Science

Huang Yingkai: To become successful, I will be learning programming languages such as Python and Java, and I will be solving practical problems as well. Internships will be critical for acquiring relevant industry experience.

Muh Khairil Mursyad: I will get my own cyber skills with special courses and certifications. Internships will provide valuable practical exposure which will enable me to apply theoretical concepts in real-world situations.

Liang Tianqi: I plan to develop my project management and leadership skills by joining university clubs and exclusive team assignments. Interacting with industry professionals will ensure up-to-date knowledge of current trends, also.

Liu Yuehui: I will work on my analytical and reasoning thinking through solving complex algorithms and participating in hackathons. I will learn new technologies as a continuous process to keep myself updated.

Mohamad Adrian: As an aspiring software developer, I will gain a solid grounding by familiarizing myself with modern tools and frameworks. Also, my communication and teamwork will be improved which are required for work with colleagues.

Conclusion

There is a need for bridging the gap between what the university education has to offer and the need of the industry to create better-skilled graduates. For universities to restructure their curriculums to be in line with industry practices, for students to take responsibility for the development of both technical and soft skills. Research partnership between industry and academia promotes innovation and equips students with industry-ready skills. Students can step into the world of technology with confidence by learning and adapting through lifelong learning and application-oriented experience.

References

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