



Princess Sumaya جامعة
University الأميرة سميرة
for Technology للتكنولوجيا



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**Princess Sumaya University for Technology
Final Report**

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No. of MOUs

Princess Sumaya University for Technology (PSUT) has been actively engaged in the ELEGANT project, fostering partnerships through various agreements and Memorandums of Understanding (MOUs). These partnerships reflect the university's commitment to advancing technology and research. Here's an overview of some of the notable collaborations established during this project:

- Jordan Teleco Group (Orange Jordan): This agreement signifies a collaboration with one of Jordan's leading telecommunications providers, indicating a strong intersection between academia and the industry in the realm of telecommunications and technology.
- I Park: Another significant agreement with I Park, which could represent a step towards enhancing entrepreneurial and technological ecosystems, leveraging the university's academic expertise and research capabilities.
- National Center for Research of Development: By signing an MOU with this center, PSUT highlights its dedication to research and development, potentially contributing to national and regional advancements in these areas.
- Khibraty: This MOU could be seen as an initiative to bridge the gap between academic knowledge and practical expertise, offering students and faculty a platform to apply and augment their skills in real-world scenarios.
- Hayat Educational Fund: Collaborating through an MOU with this educational fund suggests a commitment to broader educational initiatives, possibly focusing on areas such as scholarships, research funding, or community-oriented educational projects.

These collaborations, each unique in their scope and objectives, collectively underscore PSUT's role as a pivotal institution in fostering technological innovation and educational excellence within Jordan and potentially in the broader region.

2021

Princess Sumaya University has signed 39 MOUs with local, regional and international institutions. The signed Memoranda of Understanding contains mainly three main dimensions: the first one is the students and how to improve their practical skills, the second dimension is the curriculum development, and the last one is the research.

Table 1.MOUs 2021

	Company	Type of agreements	Country
1	Jordan Teleco Group (Orange Jordan)	Agreement	JORDAN
2	I Park	Agreement	JORDAN
3	National Center for Research of Development	MOU	JORDAN
4	Khibraty	MOU	JORDAN
5	Hayat Educational Fund	MoU	JORDAN
6	RSS & Amman Chamber of Industry	MOU	JORDAN
7	General Network-IoT Company	MOU	JORDAN
8	Sportology - Middle East	Agreement	JORDAN
9	Jordan Mobile Telephone Services ZAIN	Agreement	JORDAN
10	Al Methaleiah For Business Development	Agreement	JORDAN
11	Jordan Mobile Telephone Services ZAIN	Agreement	JORDAN
12	Ransom Company for Cyber security	MOU	JORDAN
13	Whyise	MOU	JORDAN
14	Clothing Bank	MOU	JORDAN
15	Run Jordan	MOU	JORDAN
16	Council on International Educational Exchange (CIEE)	Agreement of Cooperation	USA
17	Bank al Etihad	MOU	JORDAN
18	Jordan Teleco Group (Orange Jordan)	Agreement	JORDAN
19	EMPHNET	MOU	JORDAN
20	Neogenesis Technical Solutions	MOU	JORDAN
21	The National Center for Research and Development	MOU	JORDAN
22	Royal Jordanian Air Academy	Letter of Intent	JORDAN
23	The Higher Council for the Rights of Persons with Disabilities	Agreement	JORDAN
24	Cambridge High School	MOU	JORDAN
25	Riyadah Radio	MOU	JORDAN
26	Microfund for Women	Agreement	JORDAN
27	Al Aman Fund For the Future of Orphans	MOU	JORDAN
28	RBK	MoU	JORDAN
29	Jobedu	MoU	JORDAN

30	altibbi	MOU	JORDAN
31	Sam Engineering & Trade Co.	MOU	JORDAN
32	Entikhabate	Agreement	JORDAN
34	Jordan Mobile Telephone Services ZAIN	Agreement	JORDAN
36	The Digital Cooperation Organization	MoU	SAUDI ARABIA
37	MEMITS Solutions LLC	MOU	United Arab Emirates
38	Startups without Borders	Cooperation Agreement	UK
39	Palmear	MOU	United Arab Emirates

2022

The MoUs include several areas of cooperation between PSUT and companies, looking to underline the importance of the partnership between universities and the industry sector. Among the areas covered are the fields of information security and big data. The University will provide training for a number of the company's employees in these areas, while companies will lend support to a number of research projects carried out by PSUT students and provide guidance regarding their graduation projects.

Table 2.MOUs 2022

	Company	Type of agreements	Country
1	Al Methaleiah For Business Development	Agreement	JORDAN
2	Turquoise Mountain Foundation	Agreement	JORDAN
3	I Park	Agreement	JORDAN
4	Education For Employment – Jordan	Agreement	JORDAN
5	Crif Jordan	MOU	JORDAN
6	SIROCo Mena	MoU	JORDAN
7	Jordan Teleco Group (Orange Jordan)	Agreement	JORDAN
8	I Park	Agreement	JORDAN
9	Jordan Teleco Group (Orange Jordan)	Agreement	JORDAN
10	SEDCO	MOU	JORDAN
11	Regional Center for Space Science and Technology Education for Western Asia / United Nations	MOU	JORDAN
12	Information Systems Audit and Control Association (ISACA)	Agreement	USA
13	Israr Engineering LLC	MOU	JORDAN
14	American Excellence School	MOU	JORDAN

15	Alnada Accounting Software Services	Memorandum of Agreement	JORDAN
16	Alwafa Society of Human Development	MOU	JORDAN
17	German Jordanian	Memorandum of Understanding – now called ‘Cooperation Agreement’	JORDAN
18	Nuqtat A1 Taknolojia Lil Barmajiat LLC (part of the Amazon group of companies)	MOU	JORDAN
19	Jordan Teleco Group (Orange Jordan)	Sponsorship Agreement	JORDAN
20	Intellect & Debating Society	MOU	JORDAN
21	Friedrich Naumann Foundation	Agreement	JORDAN
22	National Fund for Enterprise Support (NAFES)	Agreement	JORDAN
23	Jordan Mobile Telephone Services ZAIN	Agreement	JORDAN
24	Qistas for Information Technology	MOU	JORDAN
25	Global Entrepreneurship Week	Memorandum of Understanding	USA
26	Information Systems Audit and Control Association (ISACA)	Memorandum of Understanding	USA
27	CrossRealms International	Memorandum of Understanding	USA
28	Global Entrepreneurship Week	Memorandum of Understanding	USA
29	Institute of Management Accountants	Memorandum of Understanding	USA

2023

In 2023 lists various agreements and memorandums of understanding (MoUs) signed by the Princess Sumaya University for Technology (PSUT) in 2023 with a range of partner institutions. These agreements are with local and international entities from countries like Jordan, Egypt, France, Palestine, the USA, Canada, and Croatia. Types of agreements include general agreements and MoUs, covering collaborative efforts in education, training, enterprise support, digital project management, and more. Notable partners include the University of Jordan, Jordanian Royal Medical Services, Arab Council for Gifted, and several other universities and organizations worldwide. The dates of signature span throughout the year 2023, indicating an active engagement in international cooperation and development programs by PSUT.

Table 3. MOUs 2023

	Company	Type of agreements	Country
1	Jordanian Royal Medical Services	MoU	JORDAN
2	Arab Council for Gifted	MoU	JORDAN
3	Jordan News Agency	MoU	JORDAN
4	Jordan Kuwait Bank	Agreement	JORDAN
5	Plan International	Agreement	JORDAN
6	I Park	Agreement	JORDAN
7	Education For Employment – Jordan	Agreement	JORDAN
8	Talents Arena	MOU	EYGPT
9	Mazaya Development & Training	MOU	JORDAN
10	IT Security Consulting & Training Co	MOU	JORDAN
11	Terre des hommes in Jordan and Palestine	MOU	JORDAN
12	Education For Employment – Jordan	Agreement	JORDAN
13	Green Circle Company	MoU	JORDAN
14	International Women's Forum	MOU	JORDAN
15	National Fund for Enterprise Support (NAFES)	Agreement	JORDAN
16	Global Entrepreneurship Week	Memorandum of Understanding	USA
17	Education For Employment – Jordan	Agreement	JORDAN
18	The Jordanian-American Commission for Educational Exchange	MOU	JORDAN
19	Education For Employment – Jordan	Agreement	JORDAN
20	I Park	Agreement	JORDAN
21	The National Agricultural Research Center (NARC)	MOU	JORDAN
22	I Park	Agreement	JORDAN
23	Promis International Digital Project Management	Agreement	JORDAN
24	Menaitech Jordan	Agreement	JORDAN
25	Crown Prince Foundation	MOU	JORDAN
26	Deloitte	Agreement	JORDAN

27	MadfoatCom.	MOU	JORDAN
28	MARSRobotics	MOU	JORDAN
29	The Independent Election Commission of Jordan	MOU	JORDAN
30	Eureka	Agreement	JORDAN
31	Education For Employment – Jordan	MOU	JORDAN
32	Al Aman Fund For the Future of Orphans	Agreement	JORDAN
33	I Park	Agreement	JORDAN
34	Investment World for Development & Technology	MOU	JORDAN
35	Intellect & Debating Society	MOU	JORDAN
36	Run Jordan	MOU	JORDAN
37	Information and Research Center - King Hussein Foundation (IRCKHF)	MoU	JORDAN
38	Jordanian Armed Forces	Agreement	JORDAN
39	Tanmeyah	MoU	JORDAN
40	EntreViable	MoU	JORDAN
41	PYXERA Global	Agreement	USA
42	ISTARI	MoU	USA

No. of students on placement

2021

We succeed in the placement of our students in different training and practical programs with our partners . For example, based on our agreement with Amazon, we nominated almost 100 female students for Amazon Campus Mentorship Series to increase awareness and preparedness of the talent pool comprising of women on engineering campuses. Amazon selected 29 female student for the training program, the internship is three months long, and we would require at least 2/3 hours of the student's time per month.

Table 4. Students on placement 2021

Company Name	Number of Students	Internship Period
CSC beyond	9	2-3 Months
Hakeem	5	2-3 Months
Huawei	7	10 days
Zain	6	6 months

Altibbi	1	3 months
Amazon	29	3 months

2022

We succeed in the placement of our students in different training and practical programs with our partners, where the training time is 2 – 3 months.

Table 5. Students on placement 2021

Company Name	Student Name
Real soft	Mutlaq Fahran Al-Sadid
Inspire	Laith Amer Al-Hattaba Qaraja
Inspire for Solutions Development	Mohamed Eldesoky
Chickmania Entertainment	Anton Anis Anton Bahou
ProgressSoft	Hamza" Mohamed Tayseer "Ghazlan
Polaris Technology	Handsome Yaqub Yusuf Malik
Green Circle	Batool Qaher Ahmed Suleiman
Trismart	Abd al rahman amer melhem
Information technology & automation co. (ITAC)	Rami akash
Yolande for technology	Mohammad wasif albaz
Qttech Networks	Muhammad Youssef Kanaan
Fbgroup	Osama abughosh
Orange	Laian Abu Arish
sociumtech	moneeb shammout
Firas Balasmeh Corporation for Control Systems - FB Group	Osama abughosh
E3 Corp FZ LLC	BASEL KEHAIL
GCEsoft	Dania Abdel Rahman Ahmed Abu Isbaa
Samsung	Abedalrhman Rasem
Facebook	Rand Abdel Fattah
Amazon	Razan awss
Imagine grp	Razan al khateeb
Jusoor	Abdulrahman Bassam El-Ghuff
Atypon/Wiley	Omar Radwan Rahwanji
Amazon	Ahmad Hammoudeh
Buttercloud	Sama Jamal Mansour
FBGroup	Osama Abughosh
Jadwelha	Omar Yanal Fuad Abeda
Maqsam	Fakher al deen
maqsam	husam amr
Logistaas	Fadi ghassan Odeh
Realsoft Advanced Applications	Anzor Naghawi

2023

Lists the placements of students within various companies, indicative of a successful internship or employment program. Students have been placed in a range of companies that various companies that spanning a well-rounded approach to student work experience and professional development.

For instance, a student named Anas Hisham Abdelrahim Hamid has been placed with Smart Media, which could be indicative of a role related to digital media and advertising. Ali Salah Mohammed Mohammed's association with OpenSooq suggests an opportunity in the e-commerce or online marketplace domain, given the company's profile.

Hamza Emad Mohammad Faiez Masuadi is listed under Orange - Coding School, which likely points to an educational role or a learning opportunity in software development or coding. Similarly, other students like Leen Amer Musa Almajthobeh and Yaser Taher Moragye Al Oqaili have been placed with RSS, which might be an organization that requires research or technical skills.

Devoteam, a placement for Ibrahim Jamal Suleiman Atiyeh, could provide an IT consulting experience, while Mohannad Mahmoud Mansor Al Dajh's placement at Orange indicates a role possibly within telecommunications. Ammar Basem Ahmad Omari's association with Awael Technologies and Yazan Mohammad Fahid Hamed Farrah's with Email Solutions might involve technology and communications services.

Mohammad Jaser Abdallah Salman is placed at PayOne, a company that could be in the financial technology sector, suggesting an experience in digital payments or transaction services. Mahmoud Ahmad Mahmoud Owaida's placement at Nuha and Haitham Kamal Rashad Al-Rawi's at Orange further indicate a broad spectrum of roles that could range from customer service to technical and operational roles within the telecommunication industry.

These placements reflect a commitment to integrating students into real-world professional environments, equipping them with practical experience, and fostering industry connections that can lead to future employment opportunities.

Table 6. Students on placement 2023

Company Name	Student Name
Smart media	ANAS HISHAM ABDELRAHIM HAMID
OpenSooq	ALI SALAH MOHAMMED MOHAMMED
Orange – a coding school	HAMZA EMAD MOHAMMAD FAIEZ MASUADI
RSS	LEEN AMER MUSA ALMAJTHOBEH
Devoteam	IBRAHIM JAMAL SULEIMAN ATIYEH

Orange	MOHANNAD MAHMOUD MANSOR AL DAJH
Awael Technologies	AMMAR BASEM AHMAD OMARI
Email Solutions	YAZAN MOHAMMAD FAHID HAMED FARRAH
PayOne	MOHAMMAD JASER ABDALLAH SALMAN
Nuha	MAHMOUD AHMAD MAHMOUD OWAIDA
RSS	YASER TAHER MORAGYE AL OQAILI
Orange	HAITHAM KAMAL RASHAD AL-RAWI

No. of Workshops for students, staff and enterprise employees

2021

PSUT has conducted over 40 workshops, each workshop targeting a specific group and motivated the industry to be a part of it. For example, the "PHI First Python workshop" targeted students, to show how different applications using python as a programming language smart. Another workshop conducted in association with the QA office at PSUT, "How to write Course Learning Outcomes" presented to the academic staff to arm them with sufficient knowledge of different methodologies of analyzing the CLOs and how the CLOs matched with different local and international accreditation.

Table 7. List of Workshops 2021

Workshop Title	Attendance	Number of attendees	Date
gate workshop	employees	30	29-May-20
G.S expert visit and hold a workshop for students	students	20	7-Jun-20
Fai Institute of Science	students	50	12-Jun-20
Workshop on how to formulate learning outcomes and design the Syllabus	employees	25	18-Jun-20
CV and cover letter writing skills	students	40	24-Jun-20
Fai Institute of Science	students	50	26-Jun-20
Google Club Workshop	students	20	4-Aug-20
A workshop entitled "CV preparation skills for work and job interviews".	students	20	21-Aug-20
Corporate Governance	students	40	22-Aug-20
Android Google Club Workshop	students	20	30-Aug-20
Creativity in collaborative problem solving	students	40	15-Sep-20

2022

Some general ideas for workshops that could benefit students, staff, and enterprise employees:

- Technology workshops: cover topics such as programming languages, software development tools, and emerging technologies like blockchain and artificial intelligence.
- Entrepreneurship workshops: focus on topics such as developing business plans, pitching ideas, and fundraising.
- Soft skills workshops: cover areas such as communication, teamwork, leadership, and time management.
- Career development workshops: include resume writing, job search strategies, and interview skills.
- Industry-specific workshops: Depending on the industries that the university's students and employees are interested in or work in, workshops could be designed to cover specific industry-related topics such as marketing, finance, or engineering.

The specific workshops offered would depend on the needs and interests of the university's students, staff, and enterprise employees. It may be helpful to survey these groups to determine the most relevant and beneficial topics to cover.

Table 8. Sample of Workshops 2022

Workshop Title	Attendanc e	Number of attendees	Date
Workshop ("Data Preparation and Modeling Using Python	Student, Faculty	29	6-Oct-21
A delegation from Turkish universities	out source	25	24-Oct-21
Data science club members meeting	Student, Faculty	42	2-Nov-21
Data Science Lecture Series by Dr. Mohammad Al-Azza	Student, Faculty	50	8-Nov-21
Data Science Lecture Series by Dr. Osama Abdul Hay	Student, Faculty	33	15-Nov-21
Data Science Lecture Series by Dr. Serin Atiani	Student, Faculty	41	29-Nov-21
Data Science Lecture Series by whom?	Student, Faculty	37	6-Dec-21
Data Science Lecture Series Dr. Ibrahim Abu Alhaol	Student, Faculty	47	20-Dec-21
Al Ghurair Scholarship Meeting	Student	24	4-Apr-22
The success story of the team that won the first place in the global competition (Women in Data Science).	Student, Faculty	29	18-May-22

A meeting with talented students. Distribution of certificates of thanks and appreciation to the first in the majors and the winners of the first positions in international competitions.	Student	22	23-May-22
A lecture on the reality of traffic safety in Jordan	Student	22	1-Jun-22
Interviews for the data science department	Student, Faculty	35	2-Jun-22
British Jordanian Society	Student, Faculty	40	2-Aug-22

2023

The provision of workshops for students, staff, and enterprise employees stands as a testament to the university's dedication to continual learning and professional growth. By organizing technology workshops, the university equips participants with cutting-edge skills in programming, software tools, and knowledge about disruptive technologies like blockchain and AI, ensuring they remain at the forefront of digital innovation. Entrepreneurship workshops serve as an incubator for nascent ideas, offering guidance on business plan formulation, effective pitching, and securing capital, thereby fostering a spirit of innovation and self-starter ship within the academic and business communities.

Moreover, the inclusion of soft skills workshops underscores the recognition of interpersonal abilities as critical to professional success. These sessions hone communication, collaboration, leadership, and time management skills, which are indispensable in any work environment. Career development workshops further this agenda by offering practical advice on resume crafting, job hunting, and mastering interviews, thereby enhancing the employability and career progression of participants.

The table presents a comprehensive schedule of workshops organized by the university from January to September 2023, meticulously designed to enhance the educational and professional competencies of students, faculty, and staff. The workshops cover a wide array of themes, including academic planning, effective communication, cybersecurity, cloud computing, and innovative financial technologies, reflecting the university's commitment to staying abreast of the rapidly evolving digital landscape. Notably, the events are strategically hosted in prestigious campus venues like the Luai Shammout Auditorium and the Friendship Auditorium, fostering an environment conducive to learning and collaboration. Specialized sessions on leadership, management, and sustainability underscore the institution's dedication to nurturing well-rounded individuals equipped to lead in diverse sectors.

The latter half of the year continues this trajectory of personal and professional development with sessions on entrepreneurial success, research methodologies, and artificial intelligence applications in healthcare. These workshops are not only geared towards imparting knowledge but also

aim at developing practical skills that are vital in today's job market, such as project management, team collaboration, and design thinking. Events such as the Career Fair Preparation and the International Academic Publishing Standards Workshop are direct responses to the needs of the university's community, preparing them for global challenges and opportunities. Furthermore, the inclusion of topics on ethics in business and corporate social responsibility highlights the university's ethos of cultivating responsible future leaders, who are mindful of their impact on society and the environment.

Table 9. Sample of Workshops 2023

Workshop Title	Attendance	Number of attendees	Date
New Year Academic Planning Workshop	Student, Faculty	28	5-Jan-23
Effective Communication Skills in the Workplace	Student, Faculty, Staff	56	12-Jan-23
Cybersecurity Trends and Best Practices Seminar	Student, Faculty	34	19-Jan-23
Introduction to Cloud Computing	Student, Faculty	43	2-Feb-23
Innovation in FinTech: Opportunities and Challenges	Student, Faculty	40	16-Feb-23
Leadership and Management Excellence	Student, Faculty, Staff	36	1-Mar-23
Entrepreneurial Success Stories	Student, Staff	51	15-Mar-23
Sustainable Development Goals Workshop	Student, Faculty	47	5-Apr-23
Career Fair Preparation and Networking Strategies	Student	24	19-Apr-23
Advanced Research Methodologies Seminar	Student, Faculty	30	3-May-23
Artificial Intelligence in Healthcare Symposium	Student, Faculty	51	17-May-23
Project Management Essentials Workshop	Student, Faculty, Staff	28	7-Jun-23
Strategies for Effective Team Collaboration	Student, Faculty, Staff	24	21-Jun-23

Design Thinking for Creative Problem Solving	Student, Faculty	44	10-Jul-23
The Role of Ethics in Business Decision-Making	Student, Faculty	42	24-Jul-23
International Academic Publishing Standards Workshop	Faculty	54	7-Aug-23
Building Resilience and Well-being in Professional Life	Student, Faculty, Staff	50	21-Aug-23
Data Visualization Techniques Using Modern Tools	Student, Faculty	43	4-Sep-23
Enhancing Corporate Social Responsibility	Student, Faculty, Staff	29	18-Sep-23
Interdisciplinary Research Collaboration Opportunities	Faculty	36	25-Sep-23

No. of company managers/experts giving lectures/seminars at the University

2021

- We invited Eng. Yousef Obidat form Hakeem Company to discuss the study plan of HIT and how it can be deal with the current market demand. (08-02-2021)
- Dr. Ammar Odeh Liaison Officer
- Dr. Mohammed Abu Snobor
- Dr. Ashraf Qaddomi
- Dr. Firas Alghanim
- Dr. Nailah Al-Madi

We conducted different Lecture Series

Table 10. Workshops 2021

Topic	Speaker	Date
Artificial intelligence ethics, theory vs practice and power shift	Ms. Sajeda Amro	1st March-2021
Between Optimization and Data Mining	Dr. Nailah Al-Madi	8th March 2021
Usage of Data Science in Telecom and Finance	Mr. Moayyad Yaghi	15 th March 2021

The crisis of p-value in big data: Is there a p-value you cannot buy?!	Dr. Osama Abdelhay	22nd March 2021
Case Study in Neuroscience & AI Driving Each Other Forward	Dr. Serin Atiani	29th March 2021
Arabic Natural Language Processing at CAMEL Lab	Dr. Nizar Habash	24th May 2021
The Role of Machine Learning in Cybersecurity	Dr. Ibrahim Abualhaol	31st of May 2021
Data Science Applications in Health Technology: Altibbi Case Study	Ms. Maria Habib and Mr. Mohammad Faris	5th of July 2021

2022

Having company managers/experts give lectures and seminars at Princess Sumaya University for Technology can be a great way for students and employees to gain insights into various industries and learn about real-world applications of the concepts they are studying. Here are some potential benefits of having company managers/experts give lectures/seminars:

Industry insights: Company managers/experts can provide valuable insights into industry trends, challenges, and opportunities that may not be covered in textbooks or academic courses.

Networking opportunities: Students and employees may have the opportunity to connect with and learn from professionals in their desired industries, potentially leading to internships or job opportunities.

Career guidance: Company managers/experts can offer advice on job search strategies, skills needed for specific careers, and what employers look for in candidates.

Practical applications: Lectures and seminars from company managers/experts can provide real-world examples of how the concepts being taught in the classroom are applied in various industries.

Motivation: Hearing from successful professionals can be inspiring and motivating for students and employees, encouraging them to pursue their goals and work harder towards achieving them.

Table 11. Workshops Conducted by Industry 2022

Topic	Speaker	Date
Agile Development Practices	Maryam Mahmoud	November 26, 2021
Algorithm Design	Yusuf Hassan	December 8, 2021
Artificial Intelligence Ethics	Yusuf Ibrahim	December 22, 2021
Software Testing Methodologies	Maryam Mahmoud	January 27, 2022
Computational Theory	Aisha Al-Sayed	March 31, 2022
DevOps Strategies	Mohammed Bakri	April 28, 2022
Predictive Modeling Techniques	Fatima Mahmoud	May 14, 2022
Machine Learning Applications	Aisha Al-Farsi	July 16, 2022
Machine Learning Applications	Mohammed Al-Farsi	August 20, 2022
Statistical Data Analysis	Mohammed Al-Sayed	August 28, 2022

2023

The table presents a series of lectures and workshops slated to occur in 2023, each addressing a critical aspect of technology and its intersection with practical and ethical considerations. The series kicks off with Dr. Leila Takayama speaking on "Ethical AI: Balancing Innovation and Responsibility" on March 1, indicating a focus on the moral implications of artificial intelligence. Eng Mohammad Khudari will delve into "Advanced Threat Detection with AI" on April 15, likely exploring AI's role in cybersecurity. Dr. Khaled will present on "Machine Learning in Quantum Computing" on May 1, a cutting-edge topic that sits at the crossroads of computational science and quantum mechanics. Dr. Sufyan's session on May 15 will examine "Software Engineering Trends in AR and VR," indicating a discussion on the latest developments in augmented and virtual realities.

On June 11, Dr. Rozana will lead a workshop on "Deep Learning for Computer Vision," which may encompass discussions on how deep learning models are revolutionizing the way machines interpret visual data. Following this, Dr. Read Muselh's lecture on June 8 about "Next-Gen Graphics: Ray Tracing in Real-Time Rendering" promises to shed light on the latest advancements in graphical rendering technologies.

The table also shows that Dr. Serin Attian is scheduled to speak about "Privacy and Security in Machine Learning Systems" on August 8, a topic emphasizing the importance of data privacy and security in the era of machine learning. Lastly, Dr. Hazem Qattous's talk on August 15 will cover "AI-Driven Design in Software Engineering," likely discussing how AI is influencing software design processes.

This schedule underscores the university's commitment to providing its community with insights into the forefront of technological advancements and the challenges that accompany them, by leveraging the expertise of distinguished professionals in the field.

Table 12. Workshops Conducted by Industry 2023

Topic	Speaker	Date
Ethical AI: Balancing Innovation and Responsibility	Dr. Leila Takayama	Wednesday, March 1, 2023
Advanced Threat Detection with AI	Eng Mohammad Khudari	Saturday, April 15, 2023
Machine Learning in Quantum Computing	Dr.Khaled	Monday, May 1, 2023
Software Engineering Trends in AR and VR	Dr. Sufyan	Monday, May 15, 2023
Deep Learning for Computer Vision	DR.Rozana	Sunday, June 11, 2023
Next-Gen Graphics: Ray Tracing in Real-Time Rendering	Dr.Read Muselh	Thursday, June 8, 2023
Privacy and Security in Machine Learning Systems	Dr.Serin Attian	Tuesday, August 8, 2023
AI-Driven Design in Software Engineering	Dr.Hazem Qattous	Tuesday, August 15, 2023

No. of student projects in which company experts are involved (either as supervisors or examiners)

2021

We participated in different projects, for example, we have two projects with Zain Company, and the first one is the Social Network Analysis (SNA) where we have 3 students and 3 supervisors from PSUT, and 2 examiners from the Zain Company (Mobile telecommunication company). The second project is Zain e-Shop which has 1 supervisor and 2 students. In addition, three students and 1 supervisor developed a "Safety Alert system" with Huawei company where this project was accepted to publish in ICCIT-2021: the 2nd International Conference on Computing and Information Technology (IEEE conference).

Table 13. Student projects with companies

Project	Company/Institution	PSUT supervisors	students	Company mentor
Social Network Analysis	Zain	Ammar Odeh,	Rakan Nader Armush	Duaa Al-Tamimi
			Tarek Sobhi Samir Salam	

			Osama Rakan Mahmoud Al- Muraikhat	
Zain Estore	Zain	Ammar Odeh,	NASSER BATTA Loay AlBarmawi	Ali Safieh
AI CHAT BOT	cscbeyond	Dr. Saleh Abu-Soud Dr.Ammar Odeh	Jude Barakat, Omar Radwan Rinata Bakeer, Zina Jamal Tawfiq Samia Imad , Aya Alaa Kazem Arafat	Abdulrahman Aboura
huawei.com	Safety Alert system	Ammar Odeh	Leen Abu Shaar Amr Darawsheh Alina Abu Siam	Nouran Abdallah AbuRabea
The Royal Scientific Society	Chemical Lab Inventory System	Mohamma d Abu Snober	Islam Ali Muhammad Zaitoun Muhammad Hosni Shehadeh Al-Qudah	Iyad Al-Dasouqi
The Royal Scientific Society	Smart Agriculture System	Mohamma d Abu Snober	Abdel Hamid Amer Mohamed Nasr Abdul Salam Hussain Al-Hindawi replied Samer Khairallah Hassan Al-Omari	Iyad Al-Dasouqi

We developed AI Chatbot with our partner cscbeyond, where we used the PSUT website as a testing platform and after we built the system we testing it on the PSUT website (Figure 1). The main objective of this project is to give students experiences of how to deal with big data and Artificial learning, the website visitor writes any question related to the university the AI chatbox analysis the question/ query and gives the visitor the most accurate answer (see Figure 2).

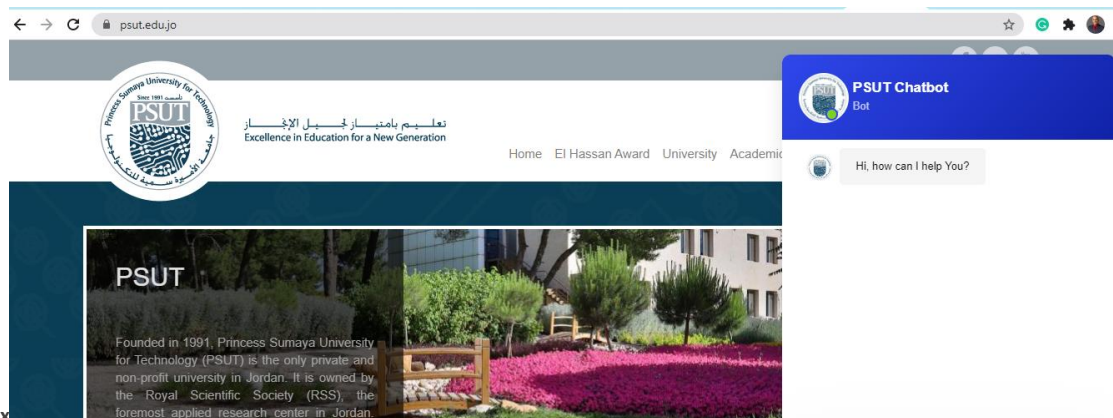


Figure 1. AI Chat Box

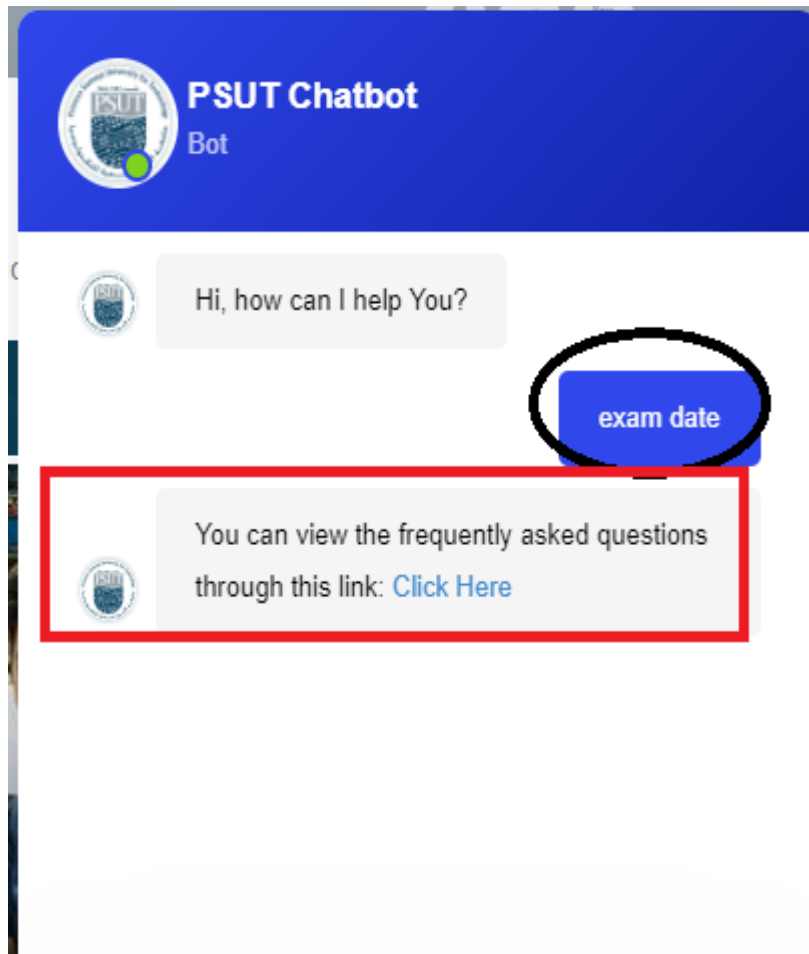


Figure 2. Example of Question and answer

Figure 3. Example of Question and answer

2022

Involving company experts in student projects at Princess Sumaya University for Technology can provide students with valuable guidance, mentorship, and real-world experience. The specific projects would depend on the interests of the university's students, as well as the expertise and needs of the companies involved. The involvement of company experts in student projects could lead to valuable mentorship, networking opportunities, and practical experience for the students.

Table 14. No. of student projects in which company experts are involved

	Student Name	supervisor	Co supervisors and examiners
1	Yaman Muhammad Radwan Yassin Khattab	Dr. Anas Abu Talib	Orange
2	Ahmed Rouhi (Ahmed Marawan) Zalmout		
3	Muhammad Abdul Rahman Muhammad Al-Rimawi		
4	Dima Bashar Kadri Arafat		
5	Dania Abdel Rahman Ahmed Abu Osba	Dr. Mustafa Fayoumi	Green Circle
6	Laith Amer Mohammed Al-Hataba Qarajah		
7	Abdul Rahman Rasim Nimr Sheikh		
8	Mahmoud Abdul Rahman Muhammad Arafa	Dr. Ammar Al-Rashdan	Green Circle
9	Abdul Rahman Amer Rajeh Melhem		
10	The den of Ali Abd al-Karim al-Barghouti		
11	Alaa Ali Abdul Rahman	Dr. Mustafa Fayoumi	Green Circle
12	Abdulaziz Maher Abdel Qader Hamdan		
13	Yasmine Mahmoud Mohamed Huda Al Khudairat	Dr. Ammar Al-Rashdan	Green Circle
14	Muhammad Haroun Muhammad Al-Barghouti		
15	Omar Radwan Muhammad Saeed Al-Rahwanji	Dr.Ammar Odeh	Hakeem
16	Basil Ali Yahya Kuhail		
17	Essam Omran Essam Abdo		
18	Adam Bagis Abdul Wahid Hassan	Dr.Ammar Al-Rashdan	Green Circle
19	Saeed Nader Saeed Hamdan		
21	Sobhi Imad Sobhi Abu Khalifa	Dr.Ammar Odeh	Green Circle
22	Lynn Amer Musa Majzobh		

23	Batool Qaher Ahmed Suleiman		
24	Shady Bassem Attia Masarwa	Dr.Ammar Odeh	Harrir
25	Munib Saeed Nasser Shammout		
26	Tina Nabil Youssef Abboud		
27	Rahaf Zaid Mahmoud Al-Qawasmeh	Dr.Ammar Odeh	Ministry of agriculture
28	Abdul Rahman Bassam Abdul Rahman Al-Ghaf		

2023

The table represents a list of student projects at a university, each involving collaboration with industry experts from various companies. These projects are supervised by different faculty members, indicating a robust partnership between academia and industry.

The first set of projects under Prof. Basel's supervision involves a collaboration with Orange. Students like Issa Ghaleb Najeeb Amari and Ala' Hassan Marwan Kabatilo are working on projects where they have the opportunity to gain real-world insights and apply academic knowledge in a practical setting, guided by both academic and industry experts.

In another set of projects, Dr. Manaf supervises students such as Adnan Raed Adnan Almikhi in partnership with Green Circle. This suggests a focus on projects that involve environmental, sustainability, or technology sectors, given the company's likely industry.

Dania Mahmoud Jamil Abukabir and Dania Mahmoud Abdalqader Abujabal are working on projects under Dr. Raghda's supervision in collaboration with Zain Company. This partnership could involve telecommunications or digital technology projects, providing students with exposure to advanced technologies and industry practices.

This table highlights the university's commitment to integrating industry experience into academic learning, offering students invaluable opportunities to work on real-world problems under the mentorship of both academic faculty and industry professionals. This approach not only enhances the practical skills of the students but also bridges the gap between academic theory and practical application.

Table 15. No. of student projects in which company experts are involved

Name of Student	Supervisor	Project partner (Company)
ISSA GHALEB NAJEEB AMARI	Prof.Basel	Orange
ALA' HASSAN MARWAN KABATILO		
ABDELRAHEIM AMMAR A. OBEIDI		
MONJED MOUSA SALIM GHUNAIM		
ADNAN RAED ADNAN ALMIKHI	Dr.Manaf	Green Circle
OTHMAN ABDELAZIZ FARES ABDALLAH		
MOHAMED WAEL MOHAMED SALEH		
DANIA MAHMOUD JAMIL ABUKABIR	Dr.Raghda	Zain Company
DANIA MAHMOUD ABDALQADER ABUJABAL		
AHMED BASEM AHMED ALBTOUSH	Dr.Osama	Progress Soft
MOHANNAD SAMEER ALI SALLAM		
LIYAN MOHAMMAD FAKHRI ALSHADAFAN	Dr.Rawan	RSS
TAREQ MAHDI IBRAHIM ABURAED		
MOHAMMD WALEED KHALED WALEED KHAMIS		
BAHA' WA'EL REBHI AYAAD	Dr.Sara	I PARK
MOHANNAD SAMEH KAMAL ATMEH		
MOHAMMAD IBRAHIM MOHAMMAD ABUAMARA		

Preparing a database of students' industry-related projects

2021

A set of project ideas targeting different sectors were presented in addition to the projects mentioned in Table 3. The projects were presented to different sectors, but they are still under study and have not been finally approved .

Table 16. Project Industrial Based 2021

Project Title	Students' Names	Sector
E-s3af.com An Online Emergency-Response Application	Saif Ali Loay AlBarmawi Tariq Al-Madhoun	Ministry of health
Automatic Attendance System For PSUT Students – (AAS) Using Facial Recognition Technology	Amro Alshadfan Amr Almuani	Ministry of education
Baleghni	Rinata Bakeer Rami Habash Mohammad Abuhilail	Public Security Directorate

E-s3af.com

E-s3af.com is a web-based mobile application that allows users to call an ambulance in case of medical emergencies using their mobile devices. It utilizes the GPS feature to give the dispatcher an accurate location of the person needing medical attention so that they send an ambulance to them as soon as possible. It also allows the authorities to check the identity of the person calling for help and find if they have underlying health problems or disabilities so that they deal with the situation properly according to protocol.

The application also contains features such as a barcode scanner for medicines to identify it and its uses and the instructions of taking the drug and the proper or

recommended dosages and has an SOS feature for people in rural areas such as the desert or the sea to call for help.

Automatic Attendance System

The Automatic Attendance System-AAS is a web-based system that uses a state-of-the-art technology of human identification using face recognition to automatically take student attendance through cameras. Generally, the Automatic Attendance System will not only solve the problem of time-wasting in taking attendance but also the problem of internal transformation and provide an accurate evaluation of students' grades compared to their attendance. It also allows students to attend compensatory lectures in coordination with the instructor.

Baleghni

Traffic accidents are becoming very common nowadays. As more people are engaged with driving, the probability of an accident to happen is increasing. The result of such increase will demand a lot of effort and time from the police, mainly due to human errors.

The main purpose of our project is to provide an application that would be used on a daily basis to report a car accident in a handy and useful way. Also, it aims to ensure that in case of a car accident, the process of requesting, reaching and communicating with a policeman is efficient and fast until the arrival of the policeman and reporting finishes.

Our application will not only solve the traffic issues resulted from accidents, but also reduce wasted effort and time, as well as improving our country's roadways by sending detailed analysis regarding the accidents to the government.

Our methodological approach is to build this application to provide an efficient rapid car accident reporting experience for all drivers, and to analyze the car accident reports to improve streets, areas and driving rules.

2022

Having a database of students' industry-related projects can be a valuable resource for students, faculty, and industry partners. It can help students to showcase their work, connect with potential employers, and inspire future projects

Baby May Cry

A wearable baby device for identifying the cry causing is embedded in a bracelet that the baby wears. It can detect the crying voice and analyze the crying pattern to see the etiology behind the crying. This system is connected to a mobile application dashboard, designed to be on their parents smartphones. The application displays what the baby wants while they cry and also displays his/her medical records, including his/her temperature and heart rate. The importance of this system is to provide parents with the information they need about what their baby needs; the parents will be aware of their baby falling and monitor their health in general.

Committees

Committees play a vital role in managing every aspect of universities, they are responsible for enhancing both the academic and managerial aspects in the functioning of a university, thus they are commonly thought of as both an effective and efficient tool that paves the path to reaching set goals [1]. However, managing committees till this day is done the old fashioned way, where analog systems are being used, which is nowhere near efficient nor effective given that data could be easily lost or mismanaged.

This is why Commiteam was created, to help facilitate the creation and management of committees which in turn help manage the different aspects of the university. Committee members using our product will easily be able to save and retrieve data, schedule meetings, generate reports, and interact with one another through the built-in chatting function. Commiteam will consist of both a website and a mobile application, all the main functionality will be supported on the website, and the mobile application will be used as a utility application to help deliver notifications.

Apollo's Hand

The purpose of this device is to enable people with speech disabilities to communicate with people that don't understand sign language. The device is able to do that by receiving the sign language as input and converting it to Text Message in a text box in the application

Table 17. Project Industrial Based 2023

MOHAMMAD HASSAN MOHAMMAD NIHAD AYYAD	Dr.Manaf	Jawaker	Game Edu Project
YAZAN HAZEM SHUKRI SHARAWI			
IBRAHIM JAMAL SULEIMAN ATIYEH			
KHALED JAMAL ALI AL-MASRI	Dr.Ammar	Orange	Object Detection Project
ABDULHKIM MIANSSOR ABULLAH NAJI THAWABA			

The table above provided details on a collaborative educational initiative involving students and their respective academic supervisors working with industry partners on specific projects. Supervised by Dr. Manaf, the first group of students, including Mohammad Hassan Mohammad Nihad Ayyad, Yazan Hazem Shukri Sharawi, and Ibrahim Jamal Suleiman Atiyeh, is partnering with the company Jawaker on a project titled "Game Edu Project." This suggests an educational focus where gaming technologies or methodologies are utilized for educational purposes, possibly developing educational games or using game design principles to create learning tools.

In the second set, under the guidance of Dr. Ammar, students Khaled Jamal Ali Al-Masri and Abdulhkim Mianssor Abullah Naji Thawaba are collaborating with Orange on an "Object Detection Project." This indicates a project steeped in technology, involving artificial intelligence, where object detection could play a crucial role in various applications such as autonomous vehicles, surveillance, or augmented reality.

The table highlights the university's hands-on approach to education, fostering a practical learning environment by engaging students in projects that offer real-world experience and industry exposure. The projects vary from creative technological solutions to innovative software engineering applications, indicative of a curriculum that values applying theory in practical scenarios. Through these projects, students are expected to gain valuable skills and insights that will benefit them in their future careers.