

Jackie Al Hayek

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LinkedIn Account URL: <https://www.linkedin.com/in/jackiehayek>

EDUCATION

American University of Beirut | Beirut, Lebanon | **From 09/2018 to Present**

Bachelor of Engineering in Electrical and Computer Engineering – Minor in Math

Expected Date of Graduation: December 2022 | **Full Scholarship Student**

Khalil Salem High School | Al koura, North Lebanon | **From 09/2015 to 07/2018**

High school diploma in General Science with a GPA of 17.4/20 (a rank of very good in the official exams)

Received 3 awards on Academic distinction in school and high school | **Honor Student for every year of school**

EXPERIENCE

Compost Baladi & MSFEA Institute Initiative | *Internship & Final year project in a group of 3* | Beirut, Lebanon | **From 9/2021 to Present**

- Retrofitting a Compost Collect unit with the necessary sensors, electronics, and software to enable remote composter unit monitoring
- Leveraging a cloud computing platform to store pertinent composter unit data, and Employing data analytics and data visualization
- Developing a machine learning model to provide stakeholders with insights on use patterns and automating it to train frequently

UDOKA Electronics | *Summer Internship* | Remotely | Gothenburg, Sweden | **From 5/2021 to 8/2021**

- Integrated their tool (ACAM) in the Arduino build environment and generated A2L files for every compiled code
- Developed a C# code and successfully Integrated SUMAC into it
- Built a custom circuit using components from Arduino tool kit, and an ethernet board
- Demonstrated that their software works with Arduino, and Prepared a detailed document of all the steps

Click Click Marketing | *Part-time Data Assistant* | Remotely | Sydney, Australia | **From 07/2020 to Present**

- Facilitating the process of collecting data by offering innovative ways
- Managing existing databases and building new databases with the needed information
- Creating invitations for campaigns while always aiming to reach a maximum number of registrations

Bedayati | *Volunteer* | Beirut, Lebanon | **From 11/2021 to Present**

- Designing and giving a set of training workshops on electronic circuits, Arduino, and basic C++ programming concepts to students of the age 16 and 19 years old.

Community Service Project | *Communications Leader* | North Lebanon | **From 01/2021 to Present**

- Leading a group of 4 in our community service project, which aims to empower the farmers in a rural area to promote self-sufficiency and enhance the local agriculture production amidst the economic crisis in Lebanon
- Reaching out to different organizations and experts in the field, understanding and effectively communicating the community needs
- Working on identifying the challenges and on organizing the logistics needed to successfully implement our project

Forum for the Rights of Persons with Disabilities | *Full-time volunteer* | Tripoli, Lebanon | **08/2020**

- Conducted social interviews and assessment, and Facilitated service delivery
- Participated in multidisciplinary team meetings to assess the vulnerability of cases and develop work plans
- Prepared interagency referral forms to other stakeholders and did all the necessary follow-ups

EXTRACURRICULAR ACTIVITIES

- Completed “Introduction to Data Science in Python”, “Supervised Learning with Scikit-learn”, “Machine Learning with Tree-Based Models in Python”, “Unsupervised learning in Python” courses on **DataCamp** | **9/2021 and 10/2021**
- Multimedia officer at Outlook | **Independent student publication of the American University of Beirut** | **From 09/2020 to 09/2021**
- Member of the Web development group of Watani initiative | **11/2020 to 12/2021**
- Tutor volunteer with MMKN Organization (Tutored Math and Physics to high school students) | **From 10/2018 to Present**
- Part-time Volunteer with Next Step AUB | **From 09/2018 to 10/2019** & with Youth Association of the Blind | **From 03/2020 to 08/2020**

PROJECTS

- EECE499: One on one research with Prof. Mazen Saghir on Serverless computing, Internet of things and Machine Learning
- EECE490: A research paper titled: “Using Machine Learning-Based Approaches for ASD Diagnosis”
- EECE423 project: Developed an AXI-Lite SPI master block, which I used to interface with a Digilent PmodACL 3-axis accelerometer through one of the Pmod connectors on a ZedBoard.
- EECE425: A research paper titled: “Tree Ensemble Compression for Embedded Machine Learning Applications”
- EECE473 project: Developing a buck converter switching design using a PIC16F877A microcontroller
- EECE680: A research paper titled: “Wearable Antennas”
- EECE421: Research paper on Groq’s Tensor Streaming Processor

SUMMARY SKILLS

Languages: Fluent in English and Arabic with limited working proficiency in French (writing, reading, and speaking)

Computer & Technical Skills: Python, C++, C#, C, Linux, VHDL, Pytorch, Tensorflow, Scikit-Learn, Pspice, Microsoft Azure Cloud, Cadence, Hspice, MATLAB, Git, Jupiter Notebooks, FPGA, Arduino, MS Word, Excel, PowerPoint, Access, Internet use, and Visual Basic, etc...

Research Skills: Analytical and critical thinking, Summarizing and categorizing, etc...

Cover Letter

Dear Mr. and Mrs. Akiki,

My name is Jackie Al Hayek, I am a 4th year(senior) student at the American University of Beirut (AUB) majoring in Electrical and Computer Engineering and minoring in Math. I am writing to express my interest in the computer and electrical engineering internship openings at Joun Technologies. My main areas of interest are VLSI, Iot, Microprocessors, Machine learning and Computer architecture.

During my university years, I have taken courses related to computer and hardware systems including but not limited to the Embedded Microprocessor Systems Designs course which was designed around the ARM Cortex-M Microcontroller. This course taught me how to program the ARM Cortex-M Microcontroller and connect it to various peripheral devices using the Texas Instruments TM4C123G LaunchPad Evaluation Kit. Also, the reconfigurable computing course, in which I worked on developing and packaging an AXI-Lite SPI master block with its driver functions, my teammates and I were also able to validate the design and generate a bit stream. We used this SPI master block to interface with a Digilent PmodACL 3-axis accelerometer through one of the Pmod connectors on the the ZedBoard, thus I am good with writing and understanding VHDL. I am currently taking the digital integrated circuits course and the VLSI Computer Aided Design Lab. I am also conducting a one-on-one research project on serverless Iot systems and AI data analytics.

For my final year project, I am working with a group of 3, with a company called Compost Baladi on designing a smart composting system for a waste management unit, the project has 3 main parts: Hardware, Cloud, and Mobile application. We are using Raspberry Pi along with other distance, temperature, and humidity sensors for the IoT system, Azure Microsoft Cloud services for the Cloud, and flutter for the mobile application. This project is fostering and strengthening my teamwork skills by continually learning that being part of a group and working toward a common goal is essential for any successful outcome.

I am so excited to apply to this position as I have honestly heard very positive feedback from a colleague of mine who previously interned with you. I am also motivated to work on a research paper on digital transformation as in addition to giving me the chance to benefit from working with a great mind, it would also be an added value to my master's journey.

My education at AUB was very challenging, finding a balance between academic demands with work, personal responsibilities, and social experiences was a difficult yet enjoyable task. Being able to overcome all the challenges made me realize that the very best is the only option I want to establish throughout my career journey. My problem-solving skills along with my critical thinking skills have prospered a lot throughout my journey at AUB. I have recently joined Bedayati, a social organization that works to empower marginalized youth, responding to their aspirations for change, and I am responsible to design an electronics path, by preparing and giving a set of ongoing workshops on basic electronics components, integrated circuits, basic programming, and interesting Arduino circuits. During my volunteering experience as a case study assistant with the Forum of the handicap, I discussed and assessed social cases with the project manager, a factor that developed my critical thinking skills. I also volunteered with Watani Initiative, an online marketplace that aims to support local Lebanese businesses to sell their products and services to the diaspora worldwide, as a member of the website development team, this opportunity expanded my social network and helped me grow as a professional. During my volunteering with Next Step AUB, an NGO committed to building an inclusive society through nurturing the abilities of persons with intellectual challenges, I spent good times with special needs individuals which allowed me to become an effective communicator and a good listener.

Given the circumstances we are living in Lebanon, I couldn't sit still and watch my parents suffer in providing basic needs. Thus, I started in July 2020 a data entry part-time job that not only helped me secure my finances but also has improved my ability to work in a fast-paced environment as I was required to get a lot of work done at a very tight deadline. I have always been responsible for my education, and my future. I worked really hard to get a fully funded scholarship to study at one of the most prestigious universities in the Middle East, AUB.

In light of the above, please find my accompanying resume. Should any references or any further information be required, please do not hesitate to contact me on the information listed below.

Thank you for your time and consideration. I look forward to hearing from you.

Sincerely,

Jackie Al Hayek

jmh36@mail.aub.edu, hayekjackie@gmail.com

+961-70591312

Student Academic Transcript

Academic Transcript (For students following the letter grading system, the GPA is capped at 4.0)

Transcript Level

All Levels

Transcript Type

Student Transcript - Web

Student Information	Degree	Transfer Credit	Institution Credit	Transcript Totals	Course(s) in Progress
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This is not an official transcript. Courses which are in progress may also be included on this transcript.

Note: For students following the letter grading system, the GPA is capped at 4.0

Student Information

Name

Ms. Jackie Mtanios Al Hayek

Curriculum Information

Program

BEN in Electr.& Comp. Eng'g

College

Maroun Semaan Fac of Eng&Arch

Major and Department

Electrical & Computer Eng'g, Electrical & Computer Eng'g

Degree

Sought

Bachelor of
Engineering

Curriculum Information

Primary Degree

Major

Electrical &
Computer Eng'g

Transfer Credit Accepted by Institution

July 2018 : Lebanese Baccalaureate

Subject	Course	Title	Grade	Credit points	Quality points	R
ARAB	102	Reading In Arab Heritage II	P	3.000	0.00	
CHEM	101	General Chemistry I	P	3.000	0.00	
CHEM	101L	General Chemistry Lab I	P	1.000	0.00	
CHEM	102	General Chemistry II	P	3.000	0.00	
CHEM	102L	General Chemistry Lab II	P	1.000	0.00	
ENGL	000	Engl Trsf General Science	P	3.000	0.00	
HIST	102	Survey of Modern Europe	P	3.000	0.00	
MATH	101	Calculus&Analytical Geometry I	P	3.000	0.00	
MATH	102	Calculus&Analytical GeometryII	P	3.000	0.00	
PHIL	101	Applied Philosophy	P	3.000	0.00	
PHYS	101	Introductory Physics I	P	4.000	0.00	

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	30.000	30.000	30.000	0.000	0.00	0.00

Institution Credit (For students following the letter grading system, the GPA is capped at 4.0)

Term : Fall 2018-2019

College

Arts & Sciences

Major

Univ.Preparation
Program

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
UPEN	003	00	Univ.Preparatory Progr.English	P	0.000	0.00	
UPHU	001	00	Humanities	P	0.000	0.00	
UPIT	002	00	Information Technology	P	0.000	0.00	
UPMA	002	00	Sat Math	P	0.000	0.00	
UPSC	002	00	Science	P	0.000	0.00	

Term Totals (Undeclared)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	0.000	0.000	0.000	0.000	0.00	0.00
Cumulative	0.000	0.000	0.000	0.000	0.00	0.00

Term : Spring 2018-2019

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
EECE	210	UG	Electric Circuits	87	3.000	261.00	
EECE	230	UG	Introduction to Programming	79	3.000	237.00	
ENGL	102	UG	Enrichment Course in English	75	3.000	225.00	A
MATH	201	UG	Calculus & Analytical Geom.III	88	3.000	264.00	
MATH	211	UG	Discrete Mathematics	74	3.000	222.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	15.000	12.000	12.000	15.000	1209.00	80.60
Cumulative	15.000	12.000	12.000	15.000	1209.00	80.60

Term : Summer 2018-2019

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
ECON	211	UG	Element.Microeconomics Theory	57	3.000	171.00	A
EECE	290	UG	Analog Signal Processing	68	3.000	204.00	
STAT	230	UG	Introd. to Probab.& Random Var	64	3.000	192.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	6.000	6.000	9.000	567.00	63.00
Cumulative	24.000	18.000	18.000	24.000	1776.00	74.00

Term : Fall 2019-2020

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Academic Standing

Good Standing

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
EECE	310	UG	Electronics	72	3.000	216.00	
EECE	310L	UG	Electric Circuits Laboratory	75	1.000	75.00	
EECE	320	UG	Digital Systems Design	90	3.000	270.00	
EECE	330	UG	Data Structures & Algorithms	74	3.000	222.00	
FEAA	200	UG	Intr.to Engineer.& Architectu.	P	3.000	0.00	
MATH	202	UG	Differential Equations	67	3.000	201.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	16.000	16.000	16.000	13.000	984.00	75.69
Cumulative	40.000	34.000	34.000	37.000	2760.00	74.59

Term : Spring 2019-2020(*)

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
EECE	311	UG	Electronics Circuits	94	3.000	282.00	
EECE	321	UG	Computer Organization	85	3.000	255.00	
EECE	321L	UG	Computer Organization Laborat.	P	1.000	0.00	
EECE	340	UG	Signals and Systems	P	3.000	0.00	
EECE	380	UG	Engineering Electromagnetics	93	3.000	279.00	
MATH	218	UG	Elem Linear Algebra w Applica.	81	3.000	243.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	16.000	16.000	16.000	12.000	1059.00	88.25
Cumulative	56.000	50.000	50.000	49.000	3819.00	77.93

Term : Summer 2019-2020

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
CHEM	201	UG	Chemical Principles	61	3.000	183.00	
EECE	370	UG	Electric Machines & Power Fundam	82	3.000	246.00	
PSPA	201	UG	Intro to Political Science	83	3.000	249.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	678.00	75.33
Cumulative	65.000	59.000	59.000	58.000	4497.00	77.53

Term : Fall 2020-2021

CollegeMaroun Semaan Fac
of Eng&Arch**Major**Electrical &
Computer Eng'g**Academic Standing**

Good Standing

Additional Standing

Honor List

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
ECON	211	UG	Element.Microeconomics Theory	80	3.000	240.00	I
EECE	421	UG	Computer Architecture	87	3.000	261.00	
EECE	481	UG	Appl.of Electromagnetic Fields	90	3.000	270.00	
ENGL	203	UG	Academic English	87	3.000	261.00	
INDE	301	UG	Engineering Economy	81	3.000	243.00	
MATH	251	UG	Numerical Computing	85	3.000	255.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	18.000	18.000	18.000	18.000	1530.00	85.00
Cumulative	83.000	77.000	77.000	76.000	6027.00	79.30

Term : Spring 2020-2021

CollegeMaroun Semaan Fac
of Eng&Arch**Major**Electrical &
Computer Eng'g**Academic Standing**

Good Standing

Additional Standing

Honor List

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
CHEM	203	UG	Introductory Chem Techniques	93	2.000	186.00	
EECE	410L	UG	System Integration Laboratory	89	1.000	89.00	
EECE	425	UG	Embedd.Microprocessor Sys.Des.	88	3.000	264.00	
EECE	473	UG	Power Electronics	90	3.000	270.00	
EECE	680	UG	Antennas for Wireless Communic	89	3.000	267.00	
ENGL	206	UG	Technical English	92	3.000	276.00	
INDE	410	UG	Engineering Ethics	87	3.000	261.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	18.000	18.000	18.000	18.000	1613.00	89.61
Cumulative	101.000	95.000	95.000	94.000	7640.00	81.27

Term : Summer 2020-2021

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
EECE	500	UG	Approved Experience	P	0.000	0.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	0.000	0.000	0.000	0.000	0.00	0.00
Cumulative	101.000	95.000	95.000	94.000	7640.00	81.27

Term : Fall 2021-2022

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Academic Standing

Good Standing

Subject	Course	Level	Title	Grade	Credit Points	Quality Points	R
EECE	423	UG	Reconfigurable Computing	86	3.000	258.00	
EECE	470L	UG	Electric Machines Laboratory	84	1.000	84.00	
EECE	490	UG	Introduct.to Machine Learning	77	3.000	231.00	
EECE	501	UG	Final Year Project	91	3.000	273.00	
MATH	210	UG	Introduction to Analysis	W	3.000	0.00	
MUSC	250	UG	Arabic & Middle Eastern Music	91	3.000	273.00	
PHYS	210	UG	Introductory Physics II	86	3.000	258.00	

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	19.000	16.000	16.000	16.000	1377.00	86.06

Term Totals (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Cumulative	120.000	111.000	111.000	110.000	9017.00	81.97

Transcript Totals (For students following the letter grading system, the GPA is capped at 4.0)

Transcript Totals - (Undeclared)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution	0.000	0.000	0.000	0.000	0.00	
Total Transfer	0.000	0.000	0.000	0.000	0.00	0.00
Overall	0	0	0	0	0.00	0.00

Transcript Totals - (Undergraduate)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution	120.000	111.000	111.000	104.000	8621.00	82.89
Total Transfer	30.000	30.000	30.000	0.000	0.00	0.00
Overall	150.000	141.000	141.000	104.00	8621.00	82.89

Course(s) in Progress

Term : Spring 2021-2022

College

Maroun Semaan Fac
of Eng&Arch

Major

Electrical &
Computer Eng'g

Subject	Course	Level	Title	Credit Points
EECE	412	UG	Digital Integrated Circuits	3.000
EECE	412L	UG	VLSI Computer Aided Design Lab	1.000
EECE	499I	UG	Serverless IoT ML	3.000
EECE	502	UG	Final Year Project	3.000
MUSC	225	UG	Music Appreciat:Histor.Survey	3.000
PSPA	222	UG	Democr,Civic Engag.&Leadership	3.000

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