# **ROZETTE HESSE**

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#### Education

Jun 2021

Aug 2017- Lebanese American University

Beirut, Lebanon

B.S. in Bioinformatics, Minor in Business Data Analytics
Placed on Honor List, cGPA:3.31

Relevant Modules: Database Management Systems, Introduction to Script Programming,

Introduction to Object-Oriented Programming, Algorithms and Data Structures, Calculus III, Differential

Equations, Biostatistics, Data Mining, Data Driven Design Thinking.

2004-2017 Lycee Hanaway- Tyre

Tyre, Lebanon

Lebanese Baccalaureate Certificate of Secondary Education in Life Sciences

Ranked 10<sup>th</sup> in the district of South Lebanon.

## Relevant Experience

Apr 2019- Academic Success Center LAU

Beirut, Lebanon

May 2021 Tutor

- Provided walk-in and online tutoring sessions in biostatistics along with SPSS tutorials.
- Delivered problem-solving sessions in line with curriculum and coordination with course instructors.
- Took initiative to create summary sheets of the significant material of each chapter in the course.

Jun 2019- Lyra Analytics

Remote, Lebanon

Aug 2019 Intern

- Led a team of four to aggregate information, clean, and explore data on different client projects.
- Collaborated in teams of three to successfully create reliable predictive models.
- Tailored interactive dashboards to specific customers' need to access and use their data.
- Utilized the models to guide clients to increase their profits.

Feb 2021- Department of Arts and Science LAU

Beirut, Lebanon

May 2021 Researcher

- Applied sequence alignment on melodies converted to alphabetic sequences of pitch intervals.
- Modeled the MSA using a profile HMM after computing global frequency of pitch intervals.
- Implemented network science approaches to cluster the aligned songs based on tune families.

Dec 2020-Present

# **Department of Informatics University of Bergen**

Remote, Lebanon

- Research Assistant
- Conducted literature review on topological edge set enrichment analysis and dysregulated pathways.
- Optimizing the mathematical method used to calculate the topological edge scores.
- Preparing a new dataset of Cancer subpathways.
- Validating the adjustment's effect on identifying the usual and dysregulated subpathways.

Jan 2020- School

#### **School of Arts and Science LAU**

Beirut, Lebanon

May 2021 Capstone Project-Researcher

- Reviewed literature related to integrin family proteins and cleft palate formation.
- Conducted coevolutionary studies on integrin subfamilies.
- Predicted secondary structures and investigated PPI of integrins beta8 and alpha10.
- Studied computationally the effect of mutations in proteins' stability and on cleft palate formation.

Jan 2020- Department of Natural Sciences LAU

Beirut, Lebanon

Apr 2020 Research Assistant

- Cleaned, filtered, and explored data from surveys on Keratoconus across the Lebanese population.
- Studied the relationship between demographics and KC using SPSS and R.
- Validated the accuracy of the logistic regression model created to display the important attributes.

## **Other Work Experience**

Oct 2019- MMKN Beirut, Lebanon

May 2020 Volunteer

- Prepared ninth grade students for the Lebanese Brevet official exam in the field of chemistry.
- Managed classroom behaviour of twelve students to assess their needs and weaknesses.
- Arranged instructional approaches to enhance their understanding of previously explained material.

#### Aug 2017- LAU Admission and Dean Office

Beirut, Lebanon

Dec 2020 V

Work-Study Student Assistant

- Advised new students and returnees with registration and major related issues.
- Collected feedback from students on workshops and events done on campus.
- Communicated with school offices to ensure validation of their attendance to the LAU annual dinner.

# Jul 2019- Mashrek Medical Diagnostic Center

Tyre, Lebanon

Aug 2019 Inte

- Examined urine cultures and stool microscopic tests to detect the presence of bacteria.
- Diagnosed infections and employed fertility tests.
- Prepared results after inserting them on the database.

## Jan 2020- Youth Opportunities

Lebanon

Jan 2021 Global Ambassador of Lebanon

- Searched for and posted different opportunities on the official website platform.
- Managed "Lebanese Youth Opportunities" page on social networking sites.
- Collaborated with different institutions to spread the cause of the platform.

### **Peer Reviewed Publications**

- Hamman, A., Hesse, R., Atat, O., Najem, S., Azzam, W., Farraj, L., & Sabbagh, M. (2020), Global Increase in the Prevalence of Keratoconus across the Lebanese Population (in review)
- Kousar, S.S., Hesse, R., K.S, M. (2020), A Comprehensive Review on Biomedical Applications of Biomaterials: Patents of the Decade (2011-2020) (in review)

#### Affiliations

#### Mar 2021- 4th LAU Case Competition

**Online Competition** 

Jun 2021

Contestant

- Attended webinars and workshops on problem-solving frameworks, data science, project management, financial analysis and pitching fundamentals.
- Worked in a team of 4 to design virtual reality products for Disney and developed a business plan.

### Jun 2020 Change the World Model United Nations

Online Conference

- Attended CWMUN virtual edition conference as the delegation of Turkey.
- Conducted extensive research to develop a position on dealing with the pandemic of COVID19.
- Collaborated with a working group to create a comprehensive draft on international resolutions.
- Delivered formal speeches and impromptu debates to advocate the position of the delegation.

## Mar 2019 LAU Collegiate Programming Contest

Beirut, Lebanon

• Awarded ninth place as a team of three for solving coding problems written in java language.

Nov 2019 Clustered Regularly Interspaced Short Palindromic Repeats

**Online Course Completion** 

# Skills, Languages, & Interests

IT SQL, Oracle, Visio, Java, Python, R, Tableau Public.

**Languages** Fluent in both Arabic and English.

**Interests** Playing the Violin, Creative writing, Fitness.

### References available upon request

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