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## Education

- *Data Science-NYC Data Science Academy*                                          *06/2018-02/2019*
  Completed a program in Data Science that focuses on supervised and unsupervised machine learning in **Python** and **R.**
  The program also covers the Foundations of Statistics, Deep Learning and Natural Language Processing**.**
  1. Developed an **Rshiny** application that models pollution levels across various US cities, allowing the user to identify seasonal and geographical patterns in the level of various air pollutants.
  2. **Web Scraping project:** Used Selenium to web-scrape various carpooling websites. The aim was to understand the factors the affect ride price.
  3. **Machine learning project:** built machine learning algorithms to optimize house-pricing prediction. The scope of the project included feature selection, imputation of missing values as well as regression and regularization techniques that minimize error in predictions.
  4. **Capstone Project:** Maximized ROI in horse racing. Worked with RACEQUANT on data from Hong Kong that covers three seasons of horse racing in order to determine the probability that a horse ranks first in a specific race. The analysis was aimed at maximizing the **ROI** based on the **Kelly Criteria for multiple outcomes**. Neural Networks were used in the prediction process.

- *Bachelor of Mechanical Engineering-American University of Beirut*                    *10/2009-02/2014*
  1. **Capstone Project:** Optimizing Solar Desalination
     Designed and implemented an automated solar desalination still aimed at optimizing the amount of vapor water produced from brackish water.
  2. **Key Research Project:** Wave Energy Conversion
     Worked on the design and implementation of a heaving buoy that models the effect of wave energy on wave energy converters, succeeding in the deployment and testing of a prototype offshore the Lebanese Coast.
  3. **Key Internship:** Process Engineer at Applied Medical (Orange County/California)
     Generated testing and operation protocols for medical trocars leading to the product's validation.
  4. **Extracurricular Activities:** AUB Track & Field Team- Medium and Long distance runner (1.5-5KM)

## Work Experience

- *Data Scientist- Carlee-Bus operator in the UAE*                                 *12/2019-07/2020*
  Supporting the Data Science and operations research team- Applying clustering algorithms to optimize the location of bus stops.

- *Data Scientist-Areeba-FinTech providing online payment solutions*               *06/2019-12/2019*
  1. Customer Churn prediction: Evaluated machine learning models to predict customer churn rate for leading banks in Lebanon. Applied Ensemble Learning techniques and data under-sampling to increase prediction accuracy.
  2. Conducted correlation studies to uncover relationships between weather and sales data in a variety of industries.
  3. Conducted research on the implementation of Hidden Markov Models in the detection of fraudulent transactions.

- *Process Engineer-Veolia Water*                                                   *05/2014-01/2018*
  Assisted with the construction and commissioning of desalination plants in Kuwait and Saudi Arabia
  1. Prepared and tested engineering procedures that evaluate the functionality of mechanical and electrical components including limestone filters, chemical sensors and pumps; leading to acceptance of work by the client.
  2. Succeeded in maintaining process engineering variables including water PH, Alkalinity **and** content **in carbon dioxide within** the optimal design range of values by using statistical and iterative testing in the collection, monitoring and analysis of on site data.
  3. Detected and rectified errors in engineering drawing, managing to prevent process engineering failures including the absence of chlorination supply to product water tanks as well as leakages in chemical tanks.
  4. Led the successful completion of hundreds of punch lists of pending construction and process engineering tasks determined by the client and required for the final handing over of the plant.

## Skills

- *Languages:* English, Arabic & French (Written &Spoken Fluently).
- *Computer Skills:* Python, R, MATLAB, Java, SQL, AUTOCAD, Microsoft Office, SolidWorks, and LABVIEW.