Mouhamad Ibrahim, PhD
DATA ANALYST

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DATA ANALYST SUMMARY

- Accomplished Data Analyst with **5+** years of expertise in statistical analysis, data visualization, and modeling across research and higher education, transitioning to industry roles with a proven track record of transforming complex data into actionable insights.
- Engineered models that expanded analysis capabilities by **65%** and boosted sensor sensitivity by **18%** at IJL.
- Collaborated on health applications projects, cut production costs by **70%** and elevated data quality by **30%** at IEMN CNRS.
- Improved data quality by **75%** and enabled robust analysis for business intelligence during an internship at Zaka AI.
- Pioneered data storytelling, authoring **5+** highly cited papers, transforming data into industry-shaping insights—one in the top **25%** Altmetric.

TECHNICAL SKILLS

Data Analysis & Visualization
- SQL: SQL Server, MySQL, Joins, Subqueries, CTEs, ETL
- Excel: Pivot Tables, XLOOKUP, Conditional Formatting
- R Programming: Data Manipulation (dplyr, data.table), Visualization (ggplot2), Statistical Analysis, tidyr, readr

Business Intelligence
- Microsoft Power BI: Report Development, DAX Measures, Power Query, Power BI Service, Power BI Desktop
- Tableau: Advanced Visualizations, Dashboard Design, Calculated Fields, Forecasting

PROJECTS

Android App Metrics Analysis (2010-2018 Data) | Zaka AI's Capstone Project   January 2024
- Orchestrated data cleaning and processing of **10k+** apps in **R**, eliminating duplicates through 'review' prioritization and imputing missing 'Rating' data with genre-specific means, improving data quality by **75%**, enabling robust analysis in **Power BI** for business intelligence.
- Refined analysis by creating the 'Deviation Metric' model in **Power BI** with **DAX**, evaluating app download performance against variable averages across **5** critical dimensions (genre, audience, etc.), amplifying visualization insights and uncovering key success factors.
- Designed and presented **Power BI** dashboards to stakeholders, communicating key success factors and insights showing how value-centric app genres and tailored designs for target audiences drove a **160%-250%** rise in downloads.

Sf Bike Share Insights (2017-2019 Data) | Zaka AI's Data Challenge   October 2023
- Created an interactive **Tableau** dashboard interpreting **1M+** rows of data, revealing key user trends informing data-driven decision-making.
- Detected that **18%** of users (casual riders) use bikes **3.5x** longer than the **82%** who are subscribers, identifying opportunities to enhance CLV through targeted conversion strategies.
- Estimated **2.73%** revenue growth by modeling **20%** casual rider conversion to subscribers, proposing retention strategies like perk boosts.

Analyzing COVID-19 Trends (2020-2021 Data) | Personal Project   June 2023
- Extracted insights and trends from large datasets through data analysis and manipulation of **85k+** records, applying **10+** complex **SQL** queries utilizing Joins, CTEs, Temp Tables, and Aggregate Functions.
- Devised mortality risk models using statistical analysis to correlate cases and deaths, identifying Lebanon's peak death rate of **4.92%**.
- Evaluated mortality disparities by normalizing death rates per capita, identifying Hungary with the highest rate of **0.28%**.

RELEVANT WORK EXPERIENCE

Data Analytics Instructor | American University of Technology   February 2017 – Present
- Elevated student communication, analytical, and visualization skills by **50%** through mentoring data analysis projects in business, transport, and management, leveraging **Excel** pivot tables to produce **7** impactful dashboards and reports.
- Boosted student engagement by **30%** with **SQL** exercises in MIS for data querying and business intelligence, attaining a **90%+** pass rate.
- Facilitated **70%+** achievement among **50%** of students in data science courses like Linear Algebra and Discrete Math by cultivating problem-solving to develop algorithm techniques, empowering **5+** students to secure programming jobs.
- Propelled **45%** of students scoring **85%+** in Probability & Statistics by integrating data analysis methodologies, achieving an **89%** pass rate.

Data Analytics Intern | Zaka AI   September 2023 – December 2023
- Ranked **1st** out of **23** in the Data Analytics specialization program, developing proficiency in **SQL**, **Excel**, **R**, statistical analysis and **BI** tools.
- Earned the **Gold Streak Badge** after mastering **6** data challenges, applying **R**, **Excel**, **Tableau**, and more to solve business problems; examples include using **R** for A/B testing website features to increase bookings and identifying loan approval key predictors via crosstabs.
- Led 2-member team capstone project investigating 10k+ Android apps using **R** and **Power BI**, delivering actionable insights for developers.

Research Data Analyst – Post-Doc | Institute of Electronics, Microelectronics & Nanotechnology (IEMN)   September 2013 – June 2015
- Collaborated cross-functionally to collect, clean, and analyze data for **50+** experiments in **Excel**, examining **4** culture environments' impact on cell adhesion under shear stress, determining a **102%** increase in fiber adhesion, a key KPI supporting 3D systems in cell studies.
- Analyzed datasets of C. Parvum culture using data mining with teamwork to unveil **3** development stage patterns, resulting in a publication.
- Engineered advanced microfluidic solutions by constructing a single-flow device integrating a 2-input injection system, optimizing data collection efficiency **400%** across **5** visualization zones, and elevating data quality with **30%** error reduction via strategic bubble prevention.

Research Data Analyst – PhD | Institute Jean Lamour (IJL)   September 2008 – December 2012
- Upgraded conductivity sensor design with **MATLAB** by engineering bioimpedance models, mining physiological characteristics as electrical elements, resulting in adoption by **4** industry leaders, each securing a patent.
- Identified optimal sensor design ratio **0.66**, using data-driven analysis and modeling, expanding analysis effectiveness by **65%**.

EDUCATION

Certification in Data Analytics | Zaka AI   December 2023
Specializations: R, Statistical Analysis, Excel, Tableau, Power BI, Data Visualization, Databases Management, ML Fundamentals | **Grade: 98%**
PhD in Biomedical Engineering | University of Lorraine   December 2012