RANIA TAREK FLEIFEL

Current data analyst,
Former Machine-learning
Research Assistant, &
an engineer

🏠 Maadi, Cairo, Egypt
📱 +201015473326
✉ raniatarekfleifel@gmail.com
🔗 https://github.com/RaniaFleifel/Projects
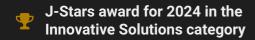in https://www.linkedin.com/in/raniafleifel
/

LANGUAGE PROFICIENCY

1) Arabic (Native)
2) English (Fluent)
Duolingo proficiency score: 140/150
(equivalent to 8 in IELTS)
3) German, Spanish (beginner)

ACHIEVEMENTS

🏆 **J-Stars award for 2024 in the Innovative Solutions category**

🏆 **Focal point in analysis of individual level and village level admin datasets of EIL partner teams within the ministry**

🏆 **First-author publication in flagship conference (WCNC-IEEE)**
a hybrid supervised-learning model to predict spectrum occupancy, using ARIMA and ANN.https://ieeexplore.ieee.org/document/7925756/

🏆 **Increased efficiency in 15 RCTs at JPAL MENA**
by automating a repetitive time-draining task and extracting it to a python-beginner level of users

EXPERIENCE

1/6/2023 - Present

Egypt Impact Lab - MPEDIC and JPAL_MENA's embedded lab - at NIGSD
Data analyst, NIGSD , Cairo, Egypt
https://www.povertyactionlab.org/egypt-impact-lab

Portfolio (responsibilities)
- Maximize added-value of 2 governmental admin datasets (datasets subject to NDA) (data cleaning, wrangling, feature extraction and engineering)
- Research and data analysis in different phases of (currently 3 ongoing, in-total 4) RCTs at JPAL MENA office and EIL (needs assessment research, survey design, data cleaning, validation, analysis, and visualization)
- Focal point for Python coding at JPAL MENA office

Deliverables:
- Incorporated recommendations in data pipeline for 2 out 2 of primary data owner partners in MPEDIC
- Qualitative survey Analysis of an RCT, paving the way to inform a change in the design
- Managing a dynamic experimental tool on AWS, that is now successfully used for +1k respondents (main stack: python, AWS, secondary stack: java)

Full stack development and deployment of
1) A website (frontend), to allow respondents to easily choose, and foresee how different combinations of microfinance options play out through backend calculations (python, flask)
2) A python algorithm that automates the audio-checks process. Abstracted to a python-beginner level, this is now used in 15 RCTs at JPAL MENA office (python)
3) A website that reads and writes from a database, to communicate information treatment to respondents and measure one of the main RCT outcomes. (python, postgresSQL, flask)

Institutional building Activities:
1) EIL: Institutionalization of data team frame of work, lead contributor for the development and delivery of the handbook and concept note
2) JPAL: Delivery of 2 Stata to python capacity building sessions for the research team

08/2022 - 01/2023

Data glacier
Data science intern, India
Equipped with the technical stack necessary in the data-science field from an industrial point of view. Projects cover:
- Version control, Agile (scrum/kanban), Flask, cloud (Heroku) and API deployment.
- Good data ingestion practices
- Addressing business problems through EDA or supervised predictive models
- Conveying findings of complicated data in a straightforward fashion.

10/2014 - 01/2018

Zewail City of science and technology
ML research assistant, Cairo, Egypt
Research Experience:
- Published a paper "LTE primary user modeling using a hybrid ARIMA/NARX neural network model in cognitive radio" in IEEE WCNC and presented work in USA in 2017. The paper proposes a hybrid supervised-learning model to predict spectrum occupancy.
- Theme of research work: Applying state-of-the-art techniques to tackle traditional communication problems such as spectrum occupancy or low-coverage indoors.
- Research topics: Artificial neural networks, cognitive radio and non-orthogonal multiple access.
- Professional Membership: IEEE Student membership

Nano-technology center Activities:
- (Nomination) Received specialized training from the mother companies on lithography equipment to start preliminary production in the mm scale for the first time in Egypt and train fellow researchers and undergrads.
- The preparation of optimization recipes of 9 central tools used for the lithography process in the clean room lab (nanotechnology research center main facility)

Capacity building Activities:
- Developed manuals of clean room lab equipment to suit different levels of access & complexity (admin/engineer, staff, students)
- Prepared content of undergraduate course "Introduction to Communications and Information Systems"

7/2012 - 9/2012

Vodafone Egypt
Radio frequency intern (2 months), Regional operations, Technology department,, Cairo, Egypt
Evaluated as an "Exceeding Expectations" trainee

FORMAL EDUCATION

2018 - 2019

THESIS WORK (ABD) – M.SC. DEGREE IN COMMUNICATION AND ELECTRONICS MAJOR
Faculty of Engineering, Cairo University
Masters' thesis topic: using different pairing techniques on a non-orthogonal multiple-access scenario, training & optimizing an ANN to predict suitable pairings.
** All degree requirements satisfied, and thesis approved for defense; defense not completed due to a family emergency.

2015 - 2017

CREDIT HOURS REQUIREMENTS COMPLETION 3.4/4 GPA –M.SC.DEGREE IN COMMUNICATION AND ELECTRONICS ENGINEERING MAJOR
Faculty of Engineering, Cairo University
Pre-master courses: pattern recognition & classification, estimation & detection, advanced numerical analysis, multi-user detection, cognitive radio, wireless sensor networks, wireless communication and technical writing

2010 - 2014

B.SC. DEGREE IN COMMUNICATION AND ELECTRONICS ENGINEERING (CREDIT HOURS SYSTEM)
Faculty of Engineering, Cairo University
Last semester GPA: 3.455/4
Accumulative GPA 2.88/4 (Very Good)
Graduation Project Grade (Excellent)
** Credit hours system is taught exclusively in English, coursework requiring written and spoken proficiency. This system also constitute 3 years of studies with computer engineering department, making it equivalent to also having computer engineering minor

CONTINUING EDUCATION

2023-2024

ExploreAI -ALX Africa (Mastercard sponsorship) Extensive Data Science program (15 months)

2023

• *Social & Behavioral Research Investigators Course - for MIT affiliates (JPAL) (4weeks)*
• *Global Research Staff Training (J-PAL & IPA) (1week)*
• *Fiscal incidence analysis (Word Bank -nomination) (1week)*
• *PMP fundamentals (USAID -nomination) (1week)*
• *Next Generation Tech Booster Challenge: Programming for Data Science with SQL (Bertelsmann - scholarship) (16weeks)*

2022

• *Data analysis professional nanodegree program – EgyFwd | Udacity (8 weeks)*
• *Intro to ML with tensor flow challenge course – Bertelsmann scholarship (8 weeks)*
• *Business Language Program –Sprints | JPP (4 weeks)*
• *Forward Program– McKinsey : Foundation level (10 weeks) , Advanced level (12 weeks)*

2021

• *"AI programming with python" nanodegree program – AAL | Udacity (12 weeks)*
• *Data challenger track – EgyFwd | Udacity (7 weeks)*

PROJECTS

2023

SCRAPING, TRANSLATING AND HOSTING A WEBSITE
https://raniafleifel.github.io/www.classcentral.com/index.html

2022

COSTUMERS' TARGETING FOR BANK MARKETING CAMPAIGN
Jupyter notebook python- Data glacier

2022

"WEB SCRAPING IN DATA SCIENCE" ARTICLE
https://medium.com/@raniatarekfleifel/web-scraping-in-data-science-d0710f208837

2022

CAB INVESTMENT DECISION
Translate data into insights to help a firm decide on the cab company to invest in based on status-quo market analysis

2021

BIKE SHARING DEMAND PREDICTION WITH AUTOGLUON SOLUTION (AWS SAGEMAKER- KAGGLE)
outcomes: EDA, Feature engineering, hyper-parameter tuning and Kaggle submission

2021

TMDB DATABASE INVESTIGATION
EDA and data wrangling, to extracts insights from TMDb movie dataset