RANIA TAREK FLEIFEL

A DATA ANALYST,
A FORMER ML RA
&
AN ENGINEER

CONTACT

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ACHIEVEMENTS

WCNC-IEEE first-author on Artificial neural networks
The paper proposes a hybrid supervised-learning model to predict spectrum occupancy.
https://ieeexplore.ieee.org/document/7925756

preliminary production and clean-room manuals for lithography process
Egypt's biggest and Zewail City's main nanotechnology facility for manufacturing on mm-scale

EXPERIENCE

1/6/2023 - Present — **Egypt Impact Lab - JPAL**
Data analyst, NGISD , Cairo, Egypt
Support in actualizing EIL's three pillars
https://www.povertyactionlab.org/egypt-impact-lab

Tasks:
- Managing admin and survey datasets to maximize the data's added-value
(data cleaning, wrangling, feature extraction and feature engineering)
- Generating insightful statistical analysis backed with dashboards to give way to evidence-based policy making
- Related documentation and research

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 through projects that cover:
- Introduction to version control, Agile (scrum/kanban), Flask, cloud (Heroku) and API deployment.
- Good data ingestion practices such as providing data intake reports, soft-coding and schema validation.
- How to address business problems by analyzing data through EDA or supervised predictive models and turning it into insights to reach informed decisions.
- Emphasis on using visualization to convey the findings of complicated data in a straightforward fashion.

LANGUAGE PROFICIENCY

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

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 my work in USA in 2017. The paper proposes a hybrid supervised-learning model to predict spectrum occupancy.
- The theme of my research: 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
Non-Academic Experience:
- Initiated the preparation of optimization recipes and manuals of 9 central tools used for the lithography process in the clean room lab (nanotechnology research center main facility)
- Chosen –among two research assistants- to receive 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.
- Contributed in preparing contents of an undergraduate course entitled "Introduction to Communications and Information Systems"

7/2012 - 9/2012 **Vodafone Egypt**
Radio frequency intern (2 months), Regional o perations, Technology department,, Cairo, Egy pt
Evaluated as an "Exceeding Expectations" trainee

FORMAL EDUCATION

2018 - 2019 **Thesis work (couldn't defend my thesis due to family emergency) – Msc of science in Communication and electronics major**
Faculty of Engineering, Cairo University
Masters' thesis topic: using different pairing techniques on a non-orthogonal MA scenario, training & optimizing an ANN to predict suitable pairings.

2015 - 2017

Credit hours requirements completion 3.4/4 GPA – Msc of science in Communication and electronics 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, and wireless communication

2010 - 2014

Bsc 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)

CONTINUING EDUCATION

Ongoing

- **AWS machine learning engineer nano-degree program – AWS | Udacity**
- **Machine learning course (Dr Andrew NG's) - Coursera**

2023

- Social & Behavioral Research Investigators Course - for MIT affiliates (JPAL)
- Next Generation Tech Booster Challenge: Programming for Data Science with SQL – Bertelsmann scholarship

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 Advanced level – Mckinsey (12 weeks)
- Forward Program Foundation level – Mckinsey (10 weeks)

2021

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

SKILLS

Programming and scripting languages

python
(pandas, numpy, scikit-learn, autogluon)
matlab
sql

Simulation frameworks

AWS Sagemaker
omnet++

Radio planning and optimization tools

Atoll
M2000

Documentation skills

TEX based systems
Scientific writing

PROJECTS

2023 **SCRAPING, TRANSLATING AND HOSTING A WEBSITE**
part of interviewing process for a us-based company
In this project, HTTrack is used to scrape a dense website classcentral.com one level deep including all embedded details, translate it to Hindi language and host the hard-coded Hindi version on a new website.
https://raniafleifel.github.io/www.classcentral.com/index.html

2022 **COSTUMERS' TARGETING FOR BANK MARKETING CAMPAIGN**
Jupyter notebook python- Data glacier
Provide ABC bank with data insights and a predictive model that enables them to target costumers who're more probable to invest in their new term deposit product.

2022 **"WEB SCRAPING IN DATA SCIENCE" ARTICLE**
Jupyter notebook python- medium- Data glacier
https://medium.com/@raniatarekfleifel/web-scraping-in-data-science-d0710f208837

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**
Jupyter notebook python
Through EDA and data wrangling, this project extracts insights from TMDb movie dataset. Through the provided features that identify the movies, their crew, budget and revenue involved plus the viewer's reviews, we test hypothesis and aid our conclusions with visualization.

2022 **CAB INVESTMENT DECISION**
Jupyter notebook python- Data glacier
Translate data into insights to help a firm decide on the cab company to invest in based on status-quo market analysis

2021 **IMAGE CLASSIFIER**
python
In this project, we train an image classifier to recognize different species of flowers.