

Ahmed Elmahy

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PERSONAL INFORMATION

Name: Ahmed Gamal Kotb Elmahy

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EDUCATION

Institute of Graduate Studies and Research, Alexandria University

Master's degree candidate in information technology

Alexandria, Egypt

Sep 2018-now

Faculty of Medicine, Alexandria University

MD

Alexandria, Egypt

Dec 2017

CLINICAL AND RESEARCH EXPERIENCE

Beside my medical degree and IT skills, I trained for two years in medical research.

Institute of computational biology, Helmholtz Zentrum Muenchen

Munich, GE

Computational biology Intern

Jan 2018 - June 2018

- Implement feature selection and classification algorithms on gene expression data in order to find genes that can predict cancer and cancer subtypes.

Alexandria University Cancer Research Cluster[1]

Alexandria, EG

Intern

Oct 2016 - Dec 2017

- Assisted in organizing the events for the foundation of the Egyptian Cancer Research Network network[2] which originated from our lab. It includes 16 Egyptian Universities and associations.
- Assisted in the biorad project[3]. A collaboration project between our lab and the Italian national cancer institute.

Egybiotech Company[4]

Alexandria, EG

Research assistant

Oct 2016 - Dec 2017

- Participated in a study to validate serum biomarkers for liver cancer funded by Oncimmune, UK

- Maintained a database for the project

High institute of Public health, Alexandria University

Alexandria, EG

Trainee

Nov. 2015- Jan 2016

- Training with Dr. Shehata Farag in biostatistics.

CURRENT POSITION

From March 2019, I work as **senior data scientist** for Wakeb data. I have been working for a year on different machine learning projects including image and video analysis such as personalizing advertisements and violence detection. I also worked with web development and cloud architectures for deploying deep learning models.

RESEARCH INTEREST

I am currently writing my Master's thesis on developing deep artificial intelligence models on high dimensional data in order to accurately predict cancer stages from gene expression data.

DRUGGO

Android application providing simplified information about drugs and pharmacy with 10,000+ users and 4.8 stars currently in Arabic and will be scaled to other languages (I wrote it with react native; a framework to build native mobile apps using JavaScript and React) <https://play.google.com/store/apps/details?id=com.otc>

SMARTADS

Driving Ads by AI: In my current job at Wakeb.tech, I am using deep learning to personalize ads. A demo is hosted here (I wrote it with Flask, pytorch and tensorflow javascript) <https://faceads.herokuapp.com>

FREELANCING EXPERIENCE

I have three 5 star reviews for working on three machine learning projects and one 5 star review for hiring other people. <https://www.freelancer.de/u/AhmedElmahy>

PUBLIC HEALTH RESEARCH

Three years ago, I conducted a study to survey health behaviours such as HIV testing among Egyptian gays Online. I published the work in a prestigious journal (Ahmed Gamal Elmahy. Reaching egyptian gays using social media: A comprehensive health study and a framework for future research. Journal of homosexuality, pages 1–10,2017)

PROGRAMMING SKILLS

Programming Skill	Description
Linux	main OS for over 7 years and use it for development
R	several years of experience
python	several years of experience
Docker	Running python and R (bioconductor) from docker images
AWS	Experience with lambda functions, cloud9, EC2 and sagemaker, already running and maintaing code on OS
latex	wrote several documents with latex
react native	wrote and published a medical android app with it (20000+ downloads)
HTML CSS JS	wrote several demo websites with them
Flask	wrote two projects with flask and uploaded to heroku servers

ONLINE ACTIVE

I am relatively active Online e.g. I have 442 reputation on academia exchange, 205 on stack-overflow, 262 on stats.stackexchange, 40 on biostars, 17 followers on github <https://academia.stackexchange.com/users/47388/elmahy>

COURSES WITH CERTIFICATES

I passed the following courses during my master's degree:

- Database Systems(A)
- Data Structures(A)
- Image Processing, Graphics and Visualization(A)
- Selected Topics in Artificial Intelligence(A)
- Communication Systems and Computer Networks(A-)
- Neural Networks and Genetic Programming(A-)
- Data Mining and Data Warehousing(A-)
- Software Engineering(B)
- Research Methodology
- Technical Writing

I passed the following courses with certificates available here (<https://ahmedelmahy.github.io/8%20-%20MOOCs.html>):

- Introduction to Systematic Review and Meta-Analysis- Johns Hopkins University on Coursera. Certificate earned on July 19, 2016
- The Data Scientist's Toolbox- Johns Hopkins University on Coursera. Certificate earned on March 30, 2016
- Framework for Data Collection and Analysis - University of Maryland, College Park. Certificate earned on September 22, 2016
- R Programming - Johns Hopkins University on Coursera. Certificate earned on March 31, 2016
- Getting and Cleaning Data - Johns Hopkins University on Coursera. Certificate earned on March 31, 2016
- Exploratory Data Analysis - Johns Hopkins University on Coursera. Certificate earned on May 27, 2016
- Statistical Inference - Johns Hopkins University on Coursera. Certificate earned on March 16, 2016
- Bayesian Statistics: From Concept to Data Analysis - University of California, Santa Cruz on Coursera. Certificate earned on October 2, 2016
- Python Data Structures University of Michigan on Coursera. Certificate earned on May 6, 2016
- Using Python to Access Web Data University of Michigan on Coursera. Certificate earned on May 22, 2016
- Using Databases with Python University of Michigan on Coursera. Certificate earned on June 9, 2016
- Machine Learning Foundations: A Case Study Approach University of Washington on Coursera. Certificate earned on March 26, 2016
- Statistical Learning course Stanford online, taught by Trevor and Hastie. statement of accomplishment with distinction earned on April 6, 2017
- Grammar and Punctuation University of California, Irvine on Coursera. Certificate earned on February 21, 2016
- Getting Started with Essay Writing University of California, Irvine on Coursera. Certificate earned on November 14, 2016
- Introduction to Genomic Technologies Johns Hopkins University on Coursera. Certificate earned on February 13, 2016
- Genomic Data Science with Galaxy Johns Hopkins University on Coursera. Certificate earned on March 16, 2016

Sample PROJECTS with python

Natural language processing with python

Detection of changes in organizations from text using Natural language processing , named entity classifiers (Did for freelancing, skills: python, nlp, nltk).

Github repo: <https://github.com/ahmedelmahy/nlpchanges>

Webscraping with python

Scraping sec.gov using public proxies (Did for freelancing, skills: python, webscraping, requests) and Scraping several other websites.

Github repos:

- o https://github.com/ahmedelmahy/webscraping_showcase
- o <https://github.com/ahmedelmahy/scraping-sec.gov>

Web automation with python and Selenium

Worked on a project for fun to automating Facebook Posting messages, photos, videos and chatting using selenium, fb api, css selectors, xpath, etc

Github repo:

- o <https://github.com/ahmedelmahy/Automating-Facebook>

Data science and deep learning with python

Currently writing a thesis on dimension reduction and deep learning with python, scipy, keras. With advanced understanding of data science, statistics and mathematics behind several models.

Others

Some code I wrote to bulk send my cv to many jobs <https://github.com/ahmedelmahy/Bulk-Email-Sender-with-attachment> Some code I wrote to extract academic emails from papaers and spam them (Just a proof of concept not intended for real usage) <https://github.com/ahmedelmahy/jobspammer>

R

Six years experience with all concepts of data science and machine learning , writing efficient code, vectorization, developping packages

- o An R package for feature selection with RNASeq and a web application using shiny to biologists to do classification without programming skills (The project required more than six months, so this a preliminary version, not well documented) <https://github.com/ahmedelmahy/RNASeqclassifier1>
<https://github.com/ahmedelmahy/RNASeqClassifier>
<https://github.com/ahmedelmahy/eczemalymphoma>
<https://alexfr.shinyapps.io/progressReport/>
- o Spam classifier with R using decision trees, svm, glm, gini index and many others (Did for freelancing, skills: R, nlp, classification) <https://github.com/ahmedelmahy/spam-classifier>
- o This script is written to distribute students at Faculty of medicine, Alexandria university to their electives based of their choices with priority to students with higher grades (Already used for two years now)
<https://github.com/ahmedelmahy/elective>
- o Others : advanced statistical plotting with ggplot2
<https://github.com/ahmedelmahy/ggplot2-animation> , <https://github.com/ahmedelmahy/readingTrack>

Others

- o C++, Java : did a data structure and algorithms course in Java and studied object oriented design and analysis in the software engineering course.
- o Javascript and react native: created two simple android apps with react native : drug magic to look up drug names with Arabic [5] and DrugGo app.
- o advanced experience with Latex, SQL, AWS, and many more.
- o I use debian linux as the main OS for long time.

Awards

- Carl Duisberg Fellowship from Bayer Foundation[6] to conduct research in Germany.
- Travel bursary to the course CSAMA 2018, Italy.
- Travel support to EMBL, European Molecular Biology Lab

ADDITIONAL

- I am a professional translator with a published book called Icons of Evolution [7]
- I speak good German.
- I am open-minded with social personality and hard worker, seriously.

Links and References

- [1] <http://www.aucerc.com/>.
- [2] <http://egycrn.net/>.
- [3] <http://www.nato-biorad.org/en/>.
- [4] <http://egybiotech.com/>.
- [5] <https://play.google.com/store/apps/details?id=com.drugmagic>.
- [6] <https://ahmedelmahy.github.io/1-%20Carl%20Duisberg%20Fellowship.html>.
- [7] https://books.google.com.eg/books/about/%D8%A3%D9%8A%D9%82%D9%88%D9%86%D8%A7%D8%AA_%D8%A7%D9%84%D8%AA%D8%B7%D9%88%D8%B1.html?id=Wi9_DQAAQBAJ&hl=en&redir_esc=y.

Next, Please find attached previous recommendation letters I have received
in the past

Dear Dr. Richa Batra,

I am writing this letter in recommendation of Ahmed Elmahy. Without hesitation, I strongly recommend him for the training opportunity he has applied for. Ahmed is a final year medical student one of the brightest and most dedicated medical students who have trained in our research group. He joined us as an undergraduate research trainee about a year ago and ever since he has proved how responsible and eager to learn he is. He has a clear idea of what he wants to learn and the experiences he aims to acquire and he is willing to put in extra time and effort to complete his tasks. If you need further information , please don't hesitate to contact me.

Best Regards



Dr. Noha Awad
Professor of Epidemiology
Executive Director Alexandria University
Cancer Research Cluster



Medical Research Institute

Dear Dr. Giulia Rossetti,

I highly recommend Ahmed Elmahy for your PhD program. I supervise Ahmed during his master's thesis. He is working on applying deep learning on gene expression data to predict cancer stages. He demonstrated creativity ,ambition with a constant keening to keep himself abreast with cutting- edge in AI . He managed to master a lot of skills such as programming and data analysis besides his undergraduate degree in Medicine. This multidisciplinary mindset is extremely important and will always lead to innovation. This is true with Ahmed as he always brings new ideas. Ahmed also has excellent academic skills such as academic writing, writing grant proposals and communicating in a professional way. Ahmed has a wonderful personality, always smiling, active and ready for challenges. He is active , perseverant and easily co operate with his peers.

I strongly support Ahmed application for this program and wish him all the best.

Prof. Dr. Fayek Elkhwsky

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Fayek Elkhwsky

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Ambassador of European Association for cancer Research
Director Alexandria Cancer Biobank*

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