

# MAHMOUD ZAKY FETOH

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[github.com/zaky-fetoh](https://github.com/zaky-fetoh)

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## Objective

I am a software Engineer passionate about solving a real-world problem, working and collaborate with a great Engineers that I can learn from. I have mixed experience across various discipline such as full stack development, data Science, computer vision and mainly devops Engineer.

## Education

2021 - 2023	<b>Faculty of Computers and Information, Menoufia university, Egypt.</b> M.Sc., doing computer vision research using deep learning, Graduated 2023
2015 - 2019	<b>Faculty of Computers and Information, Menoufia university, Egypt.</b> B.Sc. Honors, I graduated with the Top, 1st, Grade on my class, Excellent with honor GPA 3.5.  <b>Professional Certificates.</b> AWS Certified Solutions Architect - Associate <a href="#">[Link]</a> AWS Certified Machine Learning - Specialty <a href="#">[Link]</a>

## Work Experience

Dec 2023 - Present	<b>ML Cloud Consultant @ Bexprt, KSA.</b> Involved at architecting and implementing MLOps and DevOps projects for MENA customers. <i>-Technologies:</i> <b>IaC:</b> Terraform. <b>Cloud Provider:</b> AWS, Cloudflare. <b>CI/CD:</b> Github Actions, Atlantis, Terraform Cloud. <b>ETL:</b> AWS Glue Crawler, Glue Database, Glue Job, S3, Firehose. <b>MLOps:</b> SageMaker, bentoml, Prefect, MLflow, DVC. <b>Micro-frontend:</b> Cloudfront, S3, Route53. <b>Monitoring:</b> DataDog, NewRelic. <b>Container Orchestrators:</b> ECS.
May 2023 - Dec 2023	<b>DevOps Engineer @ n-go, KSA.</b> Adminstrating kubernetes clusters for 1M user Application. <i>-Technologies:</i> <b>Cloud Provider:</b> AWS, OCI, Cloudflare. <b>Container Orchestrators:</b> EKS, OKE. <b>CI/CD:</b> Jenkins, GitHub actions, ArgoCD. <b>kubernetes Autoscaler:</b> Cluster Autoscaler, karpenter. <b>Monitoring:</b> Prometheus, Grafana, Loki, ELK, Kiali, Jaeger. <b>IaC:</b> Terraform, Kustomize, Helm, Ansible. <b>VPN &amp; ZTN:</b> Pritunl, Twingate. <b>Service Mesh:</b> Istio.
Jan 2023 - Apr 2023	<b>MLops Engineer @ Susoft, Norway.</b> Building microservice application for Training and deploying machine and deep learning models for Sales forecasting. Performing customer segmentation to direct marketing campaigns. <i>-Technologies:</i> <b>Model Training:</b> PyTorchForecasting, Pytorch, pandas, Prophet, NeuralProphet. <b>Model Monitoring:</b> Weight and biases, Prometheus, Grafana. <b>Model Serving:</b> torchScript, Docker, K8s. <b>Model Registry:</b> Minio. Asynchronous communication for issuing train request is done using RabbitMQ Gateway and load balancing services performed using NodeJS.

## Frameworks & Technical Skills

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<b>Programming Languages:</b>	Python, NodeJS, GoLang (learning)
<b>HTTP Servers Frameworks:</b>	ExpressJS, Flask.
<b>Version Control Tools:</b>	Git, Github, Bitbucket.
<b>Data Science:</b>	PyTorch, Pandas, statsmodels, Prophet, Numpy, OpenCV, Plotly, LLAMA 2, PaddleOCR.
<b>MLOps:</b>	SageMaker, Prefect, bentoml, Mlflow, Hydra, DVC.
<b>Client API:</b>	REST, GraphQL, gRPC, SocketIO.
<b>Security Utilities:</b>	Joi, Jsonwebtoken (JWT), OAuth 2.0.
<b>Databases:</b>	MONGODB, MySQL, PostgreSQL, MariaDB.
<b>Adminstration:</b>	CCNA, MCSA, RHCSA, Kubernetes,
<b>Cloud Provider:</b>	AWS, OCI, Cloudflare.
<b>Monitoring:</b>	Prometheus, Grafana, Loki, ELK, kiali, jaeger, DataDog, NewRelic.
<b>Container Orchestrators:</b>	EKS, OKE, ECS, Docker-Compose.
<b>Infrastruture as Code :</b>	Terraform, Kustomize, Helm, Ansible.
<b>CI/CD:</b>	Atlantis, Terraform Cloud, Jenkins, Github Actions, ArgoCD.
<b>VPN &amp; ZTN:</b>	Pritunl, Twingate, Cloudflare Warp.
<b>Message Broker:</b>	RabbitMQ, Kafka.
<b>Documentation:</b>	Swagger, $\LaTeX$ .
<b>Caching:</b>	Redis, MinIO.

## Publications

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- 2022 **Multiscale aware classification of COVID-19 from Chest X-Ray using a spatially weighted atrous spatial pyramid pooling CNN** [[Link](#)].  
**Mahmoud Z fetoh**, Khalid M. Amin, Ahmed M. Hamad  
 In this paper I propose, scale invariant CNN architecture for COVID-19 classification. Proposed model based on building a scale space in each layer using Atrous spatial pyramid pooling then selecting a correct space to operate at using spatial attention module.
- 2021 **COVID-19 Detection Based on Chest X-Ray Image Classification using Tailored CNN Model**, [[Link](#)]. **Mahmoud Z fetoh**, Khalid M. Amin, Ahmed M. Hamad  
 In this paper I propose a very light-weight model as a consequence of using spatial separable kernel and depth-wise separable kernels for COVID-19 classification.  
**Published at:** IJCI.





MINOUFIYA UNIVERSITY

# CERTIFICATE

To whom it may concern



1/5/2023

012247

012247

Postgraduate  
Faculty of  
Computers  
and  
Information

This is to certify that Mahmoud Zaky Fetoh Zaky Attallah

born in Quotor- El-gharbia

on 2/2/ 1997

be awarded the master degree:

Computers  
&  
Information,

Major: Information Technology

field: Information Technology

grade: ----

percentage: ----

rate: ----

Subject: Automated Detection of Covid – 19 Cases in Digital Medical Images

By the Faculty Council on 21/ 11 / 2023.

Approved by the University Council on 27 / 2 / 2024.

This certificate has been issued upon his/her request.

Vice Dean

Dean

Date: 24.3.2024

24/3/2024





Menoufia University  
Faculty of Computers and Information



## Certificate

This is to certify that Mr / Mahmoud Zaky Fetoh Zaky Attallah  
Born in-Gharbeya - on February 2<sup>th</sup>, 1997 has been conferred the B.Sc.  
in Computers and Information, Major of Information Technology, May 2019.

*Grade: Excellent with honor degree*

*Cumulative Total: 3518*

*Cumulative Maximum: 4000*

*Cumulative Average: 87.95%*

*Faculty Board approval: July 14<sup>th</sup>, 2019.*

*University Council accreditation: July 14<sup>th</sup>, 2019.*

*This certificate has been issued upon his request to be submitted to whom it may concern.*

*Issued on: November 19<sup>th</sup> 2022*

*Student Affairs*

*Haia*

Mrs. Haia

*Administrator*

*AZZA*

Mrs. Azza

*Faculty Dean*

*Hamdy*

19/11/2022  
Prof. Dr. Hatem Sayed Ahmed





Postgraduate  
Faculty

Computers and Information

01208

# MENOUFIA UNIVERSITY

## TRANSCRIPT OF STUDENT'S GRADES & MARKS



Name: Mahmoud Zaky Fetoh ZakyAttallah

Degree: pre- Master (Information Technology)

Born in: Quotor- El-gharbia

On: 2/ 2 / 1997

Session & Year: January 2021

Percentage/Rate:-----

General Grade:-----

code	Course Name	Hours	Score (%)	Grade
IT621	Image Processing-3	3	78	C+
IT682	Selected Topics-2 in IT	3	76	C+
IT611	Information Networks-2	3	98	A+
IT683	Advanced Information Technology Application	3	70	C
IT681	Selected Topics in -1 in IT	3	71	C+
IT631	Pattern Recognition-3	3	70	C
EN611	Scientific Writing in English	-	70	C
MA611	Advanced Mathematics and Statistics	-	93	A+
GN611	Scientific Research Methods	-	70	C

Approved by the Faculty Council on: 15 / 6 / 2021

Approved by the University Council on:

This certificate has been issued upon his/her request to whom it may concern.

Higher Studies officer-in-Charge

Head of Division

Director of Department

*Salwa*

*Saher*

*Saher*

ViceDean for Postgraduate Studies and Research

Dean of Faculty

*[Signature]*

*[Signature]*

Date:

*24.3.2024*

*24/3/2024*





Menoufia University  
Faculty of Computers and Information

## ACADEMIC TRANSCRIPT

Faculty of computers and information certifies that Mr/ Mahmoud Zaky Fetoh Zaky Attallah  
Date of birth: 02/02/1997, Born in: Gharbeya has been awarded the BSc in Computers and Informaion,  
Department of Information Technology (I.T), May 2019.



Academic year	Subjects	Duration				Mark	Grade	Total mark	Score (%)	The general grade
		Lectures	Exercise s	Sections	Total					
1 <sup>st</sup> year 2015/2016	English language-1	3	1	2	6	55	Pass	807	80.7%	Very Good
	Mathematics-1	3	3	0	6	81	Very Good			
	Discrete Mathematics	3	3	0	6	80	Very Good			
	Arabic language	3	3	0	6	69	Good			
	Computer Introduction	3	1	2	6	81	Very Good			
	Logic Design-1	3	1	2	6	95	Excellent			
	Mathematics -2	3	3	0	6	81	Very Good			
	Algorithms and Flowcharts	3	3	0	6	98	Excellent			
	Physics	3	1	2	6	90	Excellent			
Statistics and probabilities	3	3	0	6	77	Very Good				
2 <sup>nd</sup> year 2016/2017	Logic design-2	3	1	2	6	100	Excellent	909	90.9%	Excellent
	Computer software	3	0	3	6	99	Excellent			
	Computer peripherals	3	1	2	6	93	Excellent			
	Data structure	3	3	0	6	99	Excellent			
	Organization fundamentals	3	3	0	6	88	Excellent			
	Operating systems-1	3	0	3	6	94	Excellent			
	Statistical methods	3	3	0	6	89	Excellent			
	File organization	3	0	3	6	95	Excellent			
	Operations research-1	3	3	0	6	90	Excellent			
System analysis-1	3	3	0	6	62	Pass				
3 <sup>rd</sup> year 2017/2018	Software engineering-1	3	3	0	6	85	Excellent	901	90.1%	Excellent
	Database systems-1	3	0	3	6	93	Excellent			
	Digital Signal Processing	3	1	2	6	99	Excellent			
	Computer networks-1	3	1	2	6	85	Excellent			
	College Elective-1	3	3	0	6	99	Excellent			
	Pattern Recognition	3	1	2	6	81	Very Good			
	Computer Organization	3	3	0	6	91	Excellent			
	Artificial Intelligence	3	3	0	6	85	Excellent			
	Computer Networks-2	3	1	2	6	83	Very Good			
Elective-1	3	3	0	6	100	Excellent				
4th year 2018/2019	Computer Vision	3	1	2	6	94	Excellent	901	90.1%	Excellent
	Multimedia	3	0	3	6	86	Excellent			
	Information Engineering	3	3	0	6	89	Excellent			
	Elective-2	3	3	0	6	90	Excellent			
	College Elective-2	3	3	0	6	81	Very Good			
	Information Networks	3	0	3	6	82	Very Good			
	Virtual Reality	3	3	0	6	96	Excellent			
	Digital Networks	3	3	0	6	89	Excellent			
	Elective-3	3	3	0	6	94	Excellent			
Project	1	0	5	6	100	Excellent				
Total mark	3518 ----- 4000	Total percentage		87.95%		General Grade		Excellent with honor degree		

Students Affairs

Asmaa

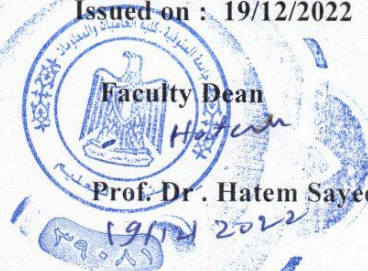
Mrs. Asmaa

Head Manager

Azza

Mrs. Azza

Issued on : 19/12/2022



Faculty Dean

Prof. Dr. Hatem Sayed Ahmed