

AHMED HAMDY ISMAIL

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OBJECTIVE

As an experienced and dedicated Assistant Professor, I am seeking a challenging academic position that offers opportunities for teaching, research, and professional development. My aim is to contribute to the academic community through my expertise in Computer Science, particularly in the areas of Security, Data Science, AI Applications, Information Hiding, and Digital Image Watermarking.

EXPERIENCE

Assistant Professor | Minya University

Nov 2020 – Now

Preparing and teaching lectures to undergraduate students, supervising graduation projects, and supervising postgraduate students. Designing, organizing and developing the faculty timetable that contains more than 250 courses every semester. Participating in the process of fulfillment of the faculty's quality standards as a coordinator of teaching and learning standard, and financial resources and material facilities standard.

Senior Software Engineer / DBA - Remotely | Sheen Solutions

Jul 2021 – Now

Working in a team work for developing a web application for GS1 Egypt Company with massive technologies used such as onion architecture, domain driven design and APIs, working as a DBA in the web application of Wonder Company in optimizing the performance of a very huge database that contains millions of data.

Assistant Professor – Part time | NUB University

Sep 2022 – Jul 2023

Preparing and teaching lectures to undergraduate students, supervising graduation projects, preparing the courses' materials and presenting in seminars. Participating in the process of fulfillment of the faculty's quality standards as a coordinator of faculty's staff and assistants' standard. Dealing with learning management system and other artificial systems that serve the education process.

STEM Course material creator | Minya University

Oct 2021 – Aug 2022

Elected to contribute in designing data science and modeling courses' materials with collaboration of five universities over Egypt and the United States team. Teaching the designed course for the second level STEM students. Supervising capstone projects related to data science.

Researcher Project Contributor | Minya University

Jan 2019 – Dec 2020

Participating as a researcher and developer in the (M2auth Research Project). The project was funded by 15,000 USD and the output was a contribution research paper that was presented and published in Twenty-Fourth International Conference of Financial Cryptography and Data Security 2020.

Assistant Lecturer | Minya University

Apr 2016 – Oct 2020

Preparing and giving lab sessions to undergraduate students

Teaching Assistant | Minya University

Dec 2013 – Mar 2014

Preparing and giving lab sessions to undergraduate students

.NET Developer | Shura Solutions

Jul 2012 – Mar 2014

Acts as individual contributor in team work about developing web based application and Mobile based application (cross platform)

.NET Developing Trainee | Shura Solutions

Jul 2010 – Jun 2012

About solo work for developing windows mobile application

EDUCATION

PhD (Computer Science) | Minya University

2016 – 2020

- Study emphases: Different Information Hiding Techniques Based on Smartphones.
- PhD's thesis: "A Study of Information Hiding Techniques Based on Smartphones"
- Advisors: Prof. Dr. Abd Al-Mageid A. Ali and Dr. Al-Hussien Seddik Saad.

MSc (Computer Science) | Minya University

2012 – 2016

- Study emphases: Different Digital Image Watermarking Techniques.
- Master's thesis: "A Study of Cryptography Based Digital Image Watermarking techniques to Increase the Security of the Watermarked Data"
- Advisors: Prof. Dr. Abd Al-Mageid A. Ali and Prof. Dr. Ahmed A. Radwan.

Bachelor (Computer Science) | Minya University

2008 – 2012

- Study emphases: Computer Systems, Computer Languages, Databases, Algorithms, Information Systems, Object Oriented Programming, Data Structures, Assembly, Operations Research, System Analysis and Design, Operating Systems, Computer Graphics, Visual Programming, Files Organization, Formal Languages, Software Engineering, Computer Graphic Theory, Information Security, Logic Programming (Prolog), Artificial Intelligence, Compiler, Image Processing, Genetic Algorithms, Multimedia, Simulation and Modeling, Computer Networks, Pattern Recognition and Decision Support Systems.
- Final Grade: 3.52 from 4 GPA Points.

PUBLICATIONS

- [1] Mahfouz, Ahmed, Ahmed Hamdy, Mohamed Alaa Eldin, and Tarek M. Mahmoud. "B2auth: A contextual fine-grained behavioral biometric authentication framework for real-world deployment." *Pervasive and Mobile Computing* (2024): 101888.
- [2] El Salam, Nada Hussien Abd, Ahmed Hamdy Ismael, and Shengwu Xiong. "Adaptive PVD-MPK encoding method in transform domain with a modified side match method against dynamic and constant attacks." *Multimedia Tools and Applications* 81, no. 16 (2022): 23493-23532.
- [3] Ahmed Mahfouz, Mohamed Alaa, Ahmed Hamdy and Tarek Mostafa, "On the Applicability of Behavioral Biometric Authentication on Smartphones", Twenty-Fourth International Conference of Financial Cryptography and Data Security 2020, February 10–14, 2020.
- [4] A. Ali, A.-H. S. Saad, and A. H. Ismael, "VRNFC-Stego: Data Hiding Technique based on VR Images and NFC-Enabled Smartphones", presented at Third International Conference on Computing and Network Communications (CoCoNet'19), December 18-21, 2019 and published in *Procedia Computer Science*, vol. 171C, pp. 1551-1560, 2020.
- [5] Ali, A.-H. S. Saad, and A. H. Ismael, "Data Hiding Technique Based on NFC-Enabled Smartphones," presented at Third International Conference on Computing and Network Communications (CoCoNet'19), December 18-21, 2019 and published in *Procedia Computer Science*, vol. 171C, pp. 2400-2409, 2020.
- [6] Ahmed H. Ismail and Abdelmgeid A. Ali, "PRNG and Cryptography Based MSLDIP Watermarking Algorithm to Increase the Security of The Watermarked Data", ICCTA Conference, October 2015.
- [7] Ahmed H. Ismail and Abdelmgeid A. Ali, "Cryptography Based MSLDIP Watermarking Algorithm", *CSC Journals, IJCSS*, Volume 9 – No 4, Pages 208-217, July/August 2015.
- [8] Ahmed H. Ismail, Abdelmgeid A. Ali and Ahmed A. Radwan, "Digital Image Watermarking using MSLDIP (Modified Substitute Last Digit in Pixel)", *IJCA*, Volume 108 – No 7, Pages 30-34, December 2014.

LEADERSHIP EXPERIENCE & CHALLENGES

Academic

- Teaching 13 undergraduate courses ranging in size from 20 - 200 students. Topics include programming basics, information security, object oriented programming, software engineering, information technology, computer architecture, image processing, data science, artificial intelligence applications, innovation in mobile development, logic design, data mining and genomic data analysis.
- Preparing course material including lectures, final exams, assignments, and oral exams.
- Supervising final graduation projects. Supervising 4 graduation projects in topics related to AI, mobile development and web development.
- Supervising postgraduate students. Supervising 3 post graduate students in their master studies. Topics include fraud detection in banking, deep fake and violence detection.
- Assisted in teaching 10 Minya undergraduate courses ranging in size from 20 - 500 students. Topics included: programming languages, database, data structure, object oriented programming, software engineering, information technology, artificial intelligence, simulation and modelling, computer architecture and image processing.
- Prepared course material including laboratory practices, practical exams, homework, and practice problems.
- Led weekly laboratory and/or problem-solving and discussion sections for groups of 20 - 35 students.
- Supervised students in final projects, graded exams and weekly homework.

Industrial

- Dealing with large databases based on MYSQL in two projects. Working on query optimization, stored procedures, deadlock and different isolation levels in MYSQL.
- Working on a project based on CQRS (domain driven design architecture).
- Being creative, hard worker, self-motivated, punctual.
- Being a good team player, have ability to work under pressure and have excellence presentation skills.

SKILLS

- Programming Languages: Python, Objective C, C++, C#, Java, R, Matlab, prolog, javascript, PHP, Assembly, Basic and Pascal.
- Programming Paradigms: Object Oriented Programming, domain driven design and CQRS.
- Database Development Tools & Languages: ADO.NET, Microsoft SQL Server Management Studio, Microsoft Access, SQL Lite, Oracle, MYSQL. Operating Systems: All windows versions, MAC OS, Linux OS.
- Developing Applications: Microsoft Visual Studio, Adobe Dreamweaver, Adobe Photoshop, Borland C++, XCode, PhoneGape, Matlab, Mysql workbench, Visual code, and Android Studio.
- Mobile SDKs: Windows Mobile, IOS, Android.

SELECTED PROJECTS

- **NDC-Wonder travel (2022 – now) | (Database Administrator):** web application for managing business of Wonder that related to flight and hotel tickets. The project includes a huge database and complex design and it was a very big challenge in increasing the performance of database side.
 - **MyGSI-Egypt (2021 – 2023) | (individual Contributor – team work):** web application for managing business of GS1 that sells and rents barcode for all products in Egypt. The project included technologies such as payment gateways, background jobs, azure platform and github.
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- **M2auth (2019 - 2020) | (Individual Contributor – team work):** research project that was funded by more than 15,000 \$, contributed in building a behavioral biometric authentication framework based on based on deep learning, Google cloud platform and Android smartphones (presented at Twenty-Fourth International Conference of Financial Cryptography and Data Security).
- **VRNFC-Stego (2018) | (Individual Contributor – team work):** mobile application for data hiding technique based on VR and NFC enabled smartphones (presented at Third International Conference on Computing and Network Communications (CoCoNet'19) and published in Procedia Computer Science Journal).
- **NFC-Stego (2017) | (Individual Contributor – team work):** mobile application for steganography method (presented at Third International Conference on Computing and Network Communications (CoCoNet'19) and published in Procedia Computer Science Journal).
- **Camouflage (2017) | (Individual Contributor – team work):** mobile application for keeping secrets into image as no one can discover these secrets (published in play store).
- **MSLDIP Watermarking (2015) | (Solo Work):** image watermarking application using MSLDIP method (published in IJCSS journal).
- **SLDIP Watermarking (2014) | (Solo Work):** image watermarking application using SLDIP method (published in IJCA Journal).
- **Shlumberger EMS (2013) | (Individual Contributor – team work):** MIS of the world's largest oilfield services which called Schlumberger.
- **Phone Gap Samples (2012) | (Solo Work):** Set of samples apps implemented by phone gap which can be deployed on major mobile operation systems.
- **Credit Hours (2012) | (Team Leader – team work):** Web application that serve credit hours system and solve problems that faced by stakeholders of the system.
- **Face Detection (2012) | (Solo Work):** pattern recognition applications for face detection.
- **Almesrya (2011) | (Individual contributor – team work):** MIS of the Almesrya (EGX) which is the largest currency exchanging company in Egypt.
- **Iphone Samples (2011) | (Solo Work):** Set of samples apps implemented by XCode for IOS.
- **SMS Timer (2010) | (Solo Work):** windows mobile application for scheduling messages.

ACHIEVEMENTS

- **(2016 – 2020):** Full Tuition PhD Scholarship for Outstanding Students, Faculty of Science, Minya University.
- **(2012 – 2016):** Full Tuition MSc Scholarship for Outstanding Students, Faculty of Science, Minya University.
- **June, 2012:** Very good with Degree of Honor (GPA 3.52), 1st place out of 50 students, Faculty of Science, Minya University, Egypt.
- **(2008 – 2010):** Excellence Students Award, Faculty of Science, Minya University, Egypt.

LANGUAGES

- **Arabic:** Native.
- **English:** Professional working proficiency.

REFERENCES

References available on request.