

PERSONAL INFORMATION

Dr. Ahmed Abdelreheem Ahmed Mohamed Khalil

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Sex: Male | Date of birth: 25/06/1991 | Nationality: Egyptian

WORK EXPERIENCE

Feb 2025 – Till Now	<p><b>Assistant Professor</b></p> <p>Statistics, Mathematics and insurance department, Faculty of Commerce, Assiut University, Assiut 71515, Egypt. <a href="http://www.aun.edu.eg">http://www.aun.edu.eg</a> <a href="https://www.aun.edu.eg/commerce/en">https://www.aun.edu.eg/commerce/en</a></p>
Jan 2019 – Jan 2025	<p><b>Teaching and Research Assistant</b></p> <p>Statistics, Mathematics and insurance department, Faculty of Commerce, Assiut University, Assiut 71515, Egypt. <a href="http://www.aun.edu.eg">http://www.aun.edu.eg</a> <a href="https://www.aun.edu.eg/commerce/en">https://www.aun.edu.eg/commerce/en</a></p> <p>Participated in the preparation of Applied Statistics course; exercise development and test corrections, preparation of General insurance course (Correction of essays, editing textbook, and data collection), and Business Mathematics (2) course preparation (Model testing and Creation of new exercises).</p>
Dec 2013 – Dec 2018	<p><b>Demonstrator</b></p> <p>Statistics, Mathematics and insurance department, Faculty of Commerce, Assiut University, Assiut 71515, Egypt. <a href="http://www.aun.edu.eg">http://www.aun.edu.eg</a> <a href="https://www.aun.edu.eg/commerce/en">https://www.aun.edu.eg/commerce/en</a></p> <p>Assist in teaching the practical lessons of undergraduate courses and participate in training and graduation projects for undergraduate students and participate in organizing conferences at Statistics, Mathematics and insurance Department as well.</p>
Mar 2025 – Till Now	<p>Coordinator of the Professional Master's Program in Insurance and Risk Management at Faculty of Commerce, Assiut university</p>
Sep 2021 – Till Now	<p>Certified trainer at the Coptic Evangelical Organization for Social Services (CEOSS).</p>
Sep 2016 – Oct 2022	<p>Academic Supervisor on the stock simulation model at Faculty of Commerce, Assiut University.</p>
Aug 2015 – Jan 2018	<p>Coordinator of Springboard Project at Assiut University, (Egypt).</p>
Jan 2015 – April 2019	<p>Certified trainer and Adjudication debates at British cultural Centre (British Council /Egypt).</p>

## ACADEMIC QUALIFICATIONS

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- Sep 2022 – present      *Doctoral degree in statistics and risk management, with English language.*  
Statistics Department, School of Mathematics and Statistics, Central south University, Changsha 40715, Hunan, China.      <https://en.csu.edu.cn/>      <https://math.csu.edu.cn/>  
My doctoral thesis which has entitled by **“Research on Prediction Problems of Egyptian Insurance Companies Based on Statistical Methods and Artificial Intelligence Techniques”**.  
My doctoral degree completed with Excellent.
- Sep 2019 – July 2021      *Pre- Ph. D courses in Statistics and Risk management with English language.*  
Statistics Department, School of Mathematics and Statistics, Central south University, Changsha 40715, Hunan, China.      <https://en.csu.edu.cn/>      <https://math.csu.edu.cn/>  
My studies were divided into two main parties; first part, related to Ph.D. courses in statistics and risk management and related subjects such as modern statistical learning theory, paper writing and academic norms, measure theory, Risk analysis and Measurement, modern probability statistics, Chinese language and overview of China course. Finished with Very Good (B+), equivalent to 3.5 of 4 GPA. Regarding Second part it was focused on the research activities.
- Sep 2015 – Dec 2018      *Master’s degree in insurance, with Arabic language.*  
Statistics, Mathematics and Insurance Department, Faculty of Commerce, Assiut University, Assiut 71515, Egypt.      <http://www.aun.edu.eg>      <https://www.aun.edu.eg/commerce/en>  
My master thesis which has entitled by **(Estimating Loss Ratio of general insurance using fuzzy neural network: Applied on Aviation insurance and Marine Hull insurance “Miser General insurance company”)**. My master’s degree completed with Excellent.
- Sep 2014 - July 2015      *Pre- M.Sc. courses in Insurance*  
Statistics, Mathematics and Insurance Department, Faculty of Commerce, Assiut University, Assiut 71515, Egypt.      <http://www.aun.edu.eg>      <https://www.aun.edu.eg/commerce/en>  
My studies were divided into two main parties; first part, related to M.Sc. courses in Insurance and related subjects such as Personal and Social Insurance, Property Insurance, Reinsurance, Actuarial statistics, Risk analysis and Measurement, Scientific Research Methodologies. Finished with Very Good (A), equivalent to 3.76 of 4 GPA. Regarding Second part it was focused on the research activities.
- Sept 2009 – Jul 2013      *Bachelor’s degree in commerce in Insurance & Mathematics and Statistics (English and Arabic Courses),*  
Statistics, Mathematics and Insurance Department, Faculty of Commerce, Assiut University, Assiut 71515, Egypt.      <http://www.aun.edu.eg>      <https://www.aun.edu.eg/commerce/en>  
Graduated with excellent 90% aggregation score. I was ranking the top of 2013’s class with honour degree "Award of the first class". Studied 52 courses included courses in Insurance, Statistics, Businesses, and Economic.

## PUBLICATION AND WORKSHOPS

### Publications

- **Ahmed, A. Khalil**, Mandour MA, Ali A. (2024). The benefits of social insurance system prediction using a hybrid fuzzy time series method. *PeerJ Computer Science*, 10: e2500 <https://doi.org/10.7717/peerj-cs.2500> (Q1 WoS)
- **Ahmed, A. Khalil**, Liu, Zaiming, Salah, A., Fathalla, A., & Ali, A. (2024). Machine Learning based Method for Insurance Fraud Detection on Class Imbalance Datasets with Missing Values. *IEEE Access*, 12, 155451-155468. <https://doi.org/10.1109/ACCESS.2024.3468993> (Q2 WoS)
- **Ahmed, A. Khalil**, Liu, Zaiming, & Ali, A. (2024). Precision in Insurance Forecasting: Enhancing Potential with Ensemble and Combination Models based on the Adaptive Neuro-Fuzzy Inference System in the Egyptian Insurance Industry. *Applied Artificial Intelligence*, 38(1), 2348413. <https://doi.org/10.1080/08839514.2024.2348413> (Q2 WoS)
- **Ahmed, A. Khalil**, Liu, Z., & Ali, A. (2024). Enhancing operational efficiency of insurance companies: a fuzzy time series approach to loss ratio forecasting in the Egyptian market. *Journal of Business Analytics*, 7(4), 318–336. <https://doi.org/10.1080/2573234X.2024.2393609> (Q3 WoS)
- **Ahmed, A. Khalil**, & Liu, Zaiming. (2024). Hybrid Predictive Modeling for Insurance Premium Retention: Integrating Statistical and AI Techniques. *International Journal of Computational Science and Engineering*. <http://dx.doi.org/10.1504/IJCSE.2024.10067258> (Q3 WoS)
- **Ahmed, A. Khalil**, Liu, Zaiming, Salah, A., Fathalla, A., & Ali, A. (2022). Predicting Insolvency of Insurance Companies in Egyptian Market Using Bagging and Boosting Ensemble Techniques. *IEEE Access*, 10, 117304–117314. <https://doi.org/10.1109/ACCESS.2022.3210032> (Q2 WoS)
- **Ahmed, A. Khalil**, Liu, Z., & Ali, A. A. (2022). Using an adaptive network-based fuzzy inference system model to predict the loss ratio of petroleum insurance in Egypt. *Risk Management and Insurance Review*, 25(1), 5-18. <https://doi.org/10.1111/rmir.12200> (Q2 WoS)
- Attia Abdelkader Ali, **Ahmed A. Khalil**, & Gamal S. Elhawbani (2025). Navigating the Banking Landscape: The Power of Social Media Communication. *International journal of internet marketing and advertising*, 22(2), 214-240. <https://doi.org/10.1504/IJIMA.2025.145070> (Q3 WoS)
- Fanidi, Meryem, Yi-An Cui, Jing Xie, **Ahmed A. Khalil**, and Syed Muzyan Shahzad. (2025). Modeling and Validating Saltwater Intrusion Dynamics by Self-Potential: A Laboratory Perspective. *Water*, 17(7), 941. <https://doi.org/10.3390/w17070941> (Q2 WoS)
- **Ahmed, A. Khalil** (2024). Insurance Fraud Detection with Integrated Statistical and Artificial Intelligence Techniques: A Robust Predictive System. *Computational Economics Journal*. Submission ID: *CSEM-D-24-00575R1*. (First Round review) (Q2 WoS)
- Mohammad A. Mandour, **Ahmed, A. Khalil**, Mohamed Elhoseny, & Omar A. Hegazy (2024). The AdaBoost Model Improved by Preprocessing Combination Based on Local Outlier Factor, F Score, and Recursive Feature Elimination for Credit Default Prediction. *Journal of Management Science and Engineering*. Submission ID: *JMSENG-D-24-00344*. (Under review) (Q1 WoS)

### Workshops

- “Computer programming and data analysis with Python”, online workshop organized by Research Society (Sep 2020).
- “Scientific research paper writing and publishing”, workshop organized by School of International

Education, Central South university (Jan 2024).

- “Writing a scientific paper using overleaf: Idea, outline, and writing”, workshop organized by School of International Education, Central South university (Feb 2024).
- “Combine different ML models to make a novel research contribution”, workshop organized by School of International Education, Central South university (Feb 2024).
- “Mastering Statistical Analysis with STATA: From Fundamentals to results”, online workshop organized by The Excellent Jordanian Researchers, Al Zaytona university of science and technology, Jordon (April 2024).
- “Workshop on Artificial Intelligence Method in Climate Prediction”, workshop organized by School of International Education, Central South university (May 2024).
- “Practical guidelines for using Smart PLS software”, online workshop organized by Community service plan of the Research & consultation Department, University of Technology and Applied Science, Salala. Oman (May 2024)
- “AI in Digital Finance – online seminar”, online workshop organized by MSCA digital Finance and Institute for economic forecasting, Romanian academy (Nov 2024).
- “Online Research Workshop in Relaxation Algorithm”, online workshop organized by Faculty of Social Sciences, University of Macau (Dec 2024).

#### Media Coverage

- **"Machine Learning based Method for Insurance Fraud Detection on Class Imbalance Datasets with Missing Values,"** Has been discussed in Oman Radio's program titled “A Discussion with Researcher”, January 22, 2025.

## CONFERENCES AND FOURMS

#### Conferences

- Open-Source Summit + AI\_dev: Open Source GenAI & ML Summit, organized by The Linux Foundation, 28 - 29 October 2024, Tokyo, Japan.
- The First Summit of Egyptian Universities: "Model Simulation of the House of Representatives at the Level of Egyptian Universities," Benha University, March 27-30, 2022, Benha, Arab Republic of Egypt.
- Conference: "Civil Society in the New Republic: Opportunities and Challenges," Coptic Evangelical Organization, December 13-14, 2021, Alexandria, Arab Republic of Egypt.
- Conference: "Towards an Effective Confrontation of Hate Speech," Coptic Evangelical Organization, September 12-14, 2019, Cairo, Arab Republic of Egypt.
- The First Forum for Units Combating Violence Against Women: "Enhancing the Role of Egyptian Public University Units to Combat Violence Against Women," Minya University in cooperation with the National Council for Women, July 25-28, 2019, Minya, Arab Republic of Egypt.
- 2<sup>nd</sup> Fair Life Re/Insurance Forum “Life Insurance and Financial Inclusions: Reaching Unreached” organized by Afro-Asian Insurance Union in Coordination with The Financial Regulatory Authority 23 - 24 April 2018, Cairo, Egypt.

## TEACHING EXPERIENCE AND TRAINING PROGRAMS

### Teaching Experience

I have taught the following practical courses to undergraduate students (1st to 4th year) majoring in Insurance, Statistics, and Mathematics:

1. Principles of Insurance
2. Business Mathematics (1)
3. Business Mathematics (2)
4. Insurance Mathematics
5. Principles of Statistics
6. Principles of Operations Research
7. Applied Statistics
8. Application of Computer language

### Training programs

I have passed the following training programs from Faculty and Leadership Development Center (FLDC) - Assiut University and Cairo University- Egypt:

- Analytical and Creative Thinking in Teaching.
- How to design electronic curriculums.
- IT Applications in Teaching and Statistical Analysis in Scientific Research.
- Student evaluation and exams systems.
- Publication of research in international journals.
- Use of technology in Teaching.
- The Effective Presentations and Communications Skills.
- Conference organization.
- University Code of Ethics.
- Effective management of time and work stressor.

As well as, I have got the following training program:

- Training Program in Governance and Anti-Corruption, National Academy for Anti-Corruption, Administrative Control Authority.
- Train the Trainers (TOT) in Dialogue, conducted by the Coptic Evangelical Organization for Social Services, Egypt.
- Regional Training for Debate Judging under Young Arab Voices program, Hammamet city, Tunisia.
- Regional Train the Trainers (TOT) for Debates under Young Arab Voice program, Dead Sea city, Jordan.
- Local Train the Trainers (TOT) for Debates under Young Arab Voices program, Cairo, Egypt.
- Training in the Art of Debates Young Arab Voices (YAV) program, Cairo, Egypt.
- How to write public policy and opinion paper.
- Negotiation skills and managing dialogue sessions.
- Communication skills and effective communication.
- Academic advising skills.

- Personal skills Diploma.
- Introduction to Human Resources.
- Communication skills and Making decision and solving problems

## PERSONAL SKILLS

### LANGUAGE SKILLS

**MOTHER TONGUE(S): ARABIC (NATIVE LANGUAGE)**

**OTHER LANGUAGE(S): ENGLISH**

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B2	B2	B2		B2

### COMMUNICATION SKILLS

#### **Developed communication skills.**

I have more than 7 years of experience in teaching and research in Insurance & statistics Sciences. Because of my job as a Teaching Assistant in Insurance and Statistics fields, I enhanced many merits and skills that help me to acquire expertise in Insurance and Statistics Sciences.

### JOB-RELATED SKILLS

The ability to assist in organizing big events and scientific conferences, Professional Academic writing, Presentation, teaching and analytic skills, Punctuality and well organisation as well as the ability to deal with challenging tasks.

#### **Computer skills**

- I have obtained ICDL (International Computer Driving Licence).
- **Language programming for Statistical and Forecasting Analysis:** Python and R Package.
- **Statistical and Multivariate Analysis:** Excel (2016); SPSS 28.0
- **Business Modelling Analysis:** Quantitative and qualitative methods Structure equation modelling analysis (SEM): Smart PLS 4, R Package and others.

#### **Other skills and personal qualities**

- Can work individually or as an effective member of a team as well.
- Ready to learn anything new by achieving it in a short time.
- Ability to work well under pressure and I passed more than experience in this way.

## AWARDS AND MEMBERSHIPS

#### **Memberships**

- Member of American Risk and Insurance Association: Malvern, US.
- Member of the Committee for Scientific Infrastructure and Equipment.
- Member of high committee for student activities at Assiut University (Sep 2017 – Oct 2022).
- Member of Academic youth program at Coptic Evangelical Organization for Social Services (CEOSS)

## Awards

- **(First Rank Certificate)** Secured First Rank in the batch of 2013 at University of Assiut, Faculty of commerce, Assiut, Egypt.
- I've got more than 25 certificates of appreciation because of scientific excellence, cultural activity, Students activities and my participation in leadership activities.

## CURRENT RESEARCH INTEREST

- Machine Learning and Big-data Analysis in Insurance and Finance.
- Financial risk management.
- Statistical analysis.
- AI adoptions in Insurance and Risk Management.
- Insurance operation and management.
- Structural Equation Modelling (SEM) in Quantitative Research.
- Developing New Statistical Methods to Improve the Accuracy of Predictions.

## ADDITIONAL INFORMATION

### References

Name	Position	University	Email
<b>Prof. Dr. Zaiming Liu</b>	Professor at Statistic department at School of Mathematics and Statistics	Central South University, China	<b><u><a href="mailto:Math_lzm@csu.edu.cn">Math_lzm@csu.edu.cn</a></u></b>
<b>Prof. Dr. Adel Mohamed Rayan</b>	Professor at Business administration Department at faculty of Commerce, and Former Vice-President for Education & Students' Affairs,	Assiut University, Egypt.	<b><u><a href="mailto:rayan@aun.edu.eg">rayan@aun.edu.eg</a></u></b>
<b>Prof. Dr. Ingy Farouk Morad</b>	Professor at insurance department, and president of statistics, mathematics and insurance department	Assiut University, Egypt.	<b><u><a href="mailto:Enjy@yahoo.com">Enjy@yahoo.com</a></u></b>
<b>Prof. Dr. Abdelsalam Ali Noweir</b>	Professor at Faculty of Commerce, and Former Dean of faculty of Commerce	Assiut University, Egypt.	<b><u><a href="mailto:abdelsalam.mansour@commerce.edu.eg">abdelsalam.mansour@commerce.edu.eg</a></u></b>