

Ahmed Saied El-Barawi

AI Specialist & Senior Engineering Manager | University Lecturer

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Summary

Accomplished IT professional with two decades of industry experience and a PhD in Artificial Intelligence, enthusiastic in delivering innovative AI-driven solutions in medical education, digital transformation, and operational optimization. Have lifelong experience in designing and implementing Linux-based systems, managing datacenter operations, and spearheading strategic technology initiatives. In addition, I serve as an academic lecturer and professional trainer. I frequently present at conferences, offering deep insights into the latest AI technologies and their practical applications to foster growth and innovation.

I excel in:

- **AI-Driven Solutions:** Developing innovative applications for medical education and digital transformation.
- **Technical Leadership:** Leading technological initiatives, managing IT infrastructures and building teams from scratch.
- **Building Systems:** Designing and implementing high-performance systems.
- **Teaching & Training:** Delivering advanced technology and AI education.
- **Conference Presentations:** Sharing insights on AI applications at local/international forums.

Technical Skills

- **Management/Consultation:** Strategic planning, digital transformation.
 - **Machine Learning:** TensorFlow, LLMs, MLOps, MLflow, TFX.
 - **Data Engineering:** ETL, Modeling, PowerBI.
 - **Software Engineering:** Python, PHP, CI/CD, Git, Jenkins, Nexus, Rancher.
 - **Databases:** MSSQL, Redis, MySQL, Oracle DBA.
 - **Infrastructure:** Linux, Azure Kubernetes clusters, Solaris, VMware, Hyper-V, SAN, Veritas.
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Experience

Head of DevOps - Sherkey.net – Cairo, Egypt, Stuttgart, Germany.

Feb 2024 – Present (freelance)

Sherkey.net, pioneering a platform for seamless remote company formation with specialized legal and accounting support.

- Lead the DevOps team, focusing on managing and optimizing Microsoft Azure Kubernetes Service (AKS) to ensure high availability and scalability of services.
- Enhanced client experiences by integrating robust DevOps practices and cloud solutions, significantly improving deployment times and system reliability for company clients.
- Lead of AI and Data Engineering division focusing on leveraging Machine Learning and Generative Models in exploration and optimization of business formation processes.

Head of IT Department - College of Medicine, AASTMT - Alamein, Egypt.

Sep 2022 – now (fulltime)

The Arab Academy for Science, Technology, and Maritime Transport (AASTMT) is a regional university focused on scientific research, technology, and maritime transport. The College of Medicine at Alamein, Egypt, is one of its institutions, committed to integrating technology with traditional learning to enhance education and equip students for the evolving medical sector.

As Head of IT, I have led transformative projects that enhanced the learning experience and operational efficiency. I established a digital learning ecosystem and developed "Mediq," an AI-powered platform integrating with Moodle to offer personalized tutoring, language translation, and more. I also initiated the AI in Medicine Students Conference, developed a facial recognition attendance system, and increased staff productivity by 20%, positioning the college as a leader in medical education and research.

During my time at AAST, I did:

- Directed the digital transformation strategy at the College of Medicine, enhancing educational and operational capabilities.
- Created a comprehensive digital learning ecosystem that includes an LMS portal, live classrooms, recorded lectures, an Extended Reality lab, and a virtual hospital, benefiting over one thousand students and staff.
- Developed "Mediq," an AI-powered platform planned for SaaS deployment, integrating with Moodle, and utilizing AI technologies like ChatGPT and Med-PaLM 2 for enhanced medical education features such as personalized tutoring and adaptive testing.
- Spearheaded AI integration in medical research, launched the first AI in Medicine Students Conference, and collaborated on multiple projects with the College of AI.

- Implemented an in-house facial recognition attendance system and developed three Moodle plugins, significantly boosting staff productivity by 20% and saving over 1M EGP annually by reducing reliance on external IT solutions.
- Lead the team to develop software systems that cover exam seatings management, OSCE exams management, Clinical/summer training booking and management system.

Curriculum Developer and Lecturer - Code Academy - Muscat, Oman.

Jul 2023 – now (freelance)

Code Academy in Muscat, Oman, focuses on advanced training in digital and technological skills, aligning its programs with the needs of the Fourth Industrial Revolution to enhance individual and organizational capabilities.

As a Curriculum Developer and Lecturer at Code Academy since July 2023, I have developed and delivered specialized courses in IT Ecosystem Observability Engineering, Data/ML Engineering and AI, and Advanced Linux Systems. These programs aim at lifting technical proficiency in IT infrastructure and artificial intelligence, preparing students for advanced industry roles.

During my time at Code Academy, I did:

- Developed specialized curricula for IT Ecosystem Observability Engineering, ensuring comprehensive training in system monitoring and management.
- Led a Data/ML Engineering and Artificial Intelligence Bootcamp, focusing on practical applications of AI and machine learning in real-world scenarios.
- Created an advanced track on Linux Systems, which includes detailed modules on datacenters observability, monitoring, data protection, and backup, preparing students for critical IT infrastructure roles.

Assistant Professor - Colleges of Artificial Intelligence, and Engineering – Alexandria, Egypt.

Sep 2022 – now (freelance)

- Elevated student knowledge in core academic courses including Operating Systems and Machine Learning, enhancing their technical proficiency and application skills in these critical areas.

Professional Trainer - Colleges of Medicine and Graduate School of Business – Egypt.

2021 – now (freelance)

- Conducted specialized courses such as AI in Medical Fields, focusing on the integration of artificial intelligence in healthcare.

- Led training sessions on Prompt Engineering and Advanced Linux Systems, addressing advanced technical skills tailored for professionals in medicine and business.

**IT Systems Architect, Research Support and Education Development Unit, AAST
Datacenter** - Alexandria, Egypt.

2017 – 2022

- Established a private cloud of 20+ hosts at AAST to help research, resulting in the publication of 150+ papers. Administered 6 Linux clusters for application hosting and provisioning.
- Launched 4 GPU-based workers for four scientific modeling projects. Led IT projects like HubSpot CRM, Moodle, Kortex, and virtual classrooms, driving the university's digital transformation.
- Played a pivotal role in providing researchers with necessary resources and technologies to conduct groundbreaking research, positioning AAST as a leading institution in the region.

Senior Linux Systems Administrator, Computer Networks and Datacenter, AAST – Egypt

2012 – 2017

- Directed a team to improve datacenter efficiency and business continuity, notably reducing security breaches by setting up an information security division.
- Developed datacenter infrastructure for AAST University to enhance education and research. Optimized operations using Linux clusters, operated Oracle DB, MySQL, and Galera databases, and managed web hosting.

Solaris/Linux Systems Administrator, E-Government (Yesser), Ministry of Communication
- Riyadh, Saudi Arabia.

2008 – 2012

- Managed infrastructure for 100 Unix SPARC/Solaris and Linux servers. Operated Oracle database clusters, NetApp SAN storage networks, and backend hosting for saudi.gov.sa and yesser.gov.sa. Executed datacenter backups with Veritas and led national network deployments, promoting public service digitalization.

Web Developer and Systems Administrator, AAST - Alexandria, Egypt

2002-2008

- Accomplishments include building and web mastering AAST website (aast.edu) and more than ten other applications.

Volunteering

Linux System Engineer, Regional and International Collegiate Programming Contest (ICPC) 2015 - 2022

As a volunteer since 2015, I've made contributions to the SysOPS Team at the Regional and International Collegiate Programming Contest (ICPC): PC2 contest server administration, developed AI-power service, a facial recognition system to annotate team contestants in videos and images, facilitated the live streaming of the contest's activities, ensuring a seamless virtual experience for all participants and viewers.

Public Speaker, Multiple conferences

2020 – now

- SurgiAlex conference - 2024: Delivered a keynote on AI applications in medical education with title “How Generative Models Impact the Coming Future of Learning”.
- Anatomy Education and Research conference - 2023: AI and Extended Reality in Medical Anatomy training and research, Decoding Health - AI's Leap in Medical Research (ChatGPT Era).
- IEEE-AAST events.
- ICCTA 2015, 2018, 2022.

Blended Learning solutions engineer, Multiple schools - Alexandria, Egypt.

2019 - now

Led teams for three projects over 6 years at multiple schools. introducing transformation toward effective blended learning infrastructure.

Certification

- **Digital Transformation Specialist**: Coursera (Oct 2023 – Dec)
- **Machine Learning Operations Engineer**: Coursera (Aug 2022 – Dec)
- **Oracle Certified Database Administrator**: (2012)

Education

Doctoral of Philosophy – PhD, Helwan University, College of Artificial Intelligence - Cairo, Egypt

2018 – Feb 2022

Completed doctoral research on using Deep Learning for computational economics and finance, resulting in four publications in Q2 and peer reviews journals. Explored Deep Learning applications in fraud detection, cryptocurrency pricing, commodity forecasting, and electricity demand prediction. Google Scholar profile (<https://shorturl.at/biqBL>).

Master, Computer Science: AAST, Alexandria, Egypt (2007 – 2010)

Bachelor, Computer Science: Helwan University, Cairo, Egypt (1997 - 2001)
