

# Ahmed Abdou

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## EDUCATION

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- **Technical University of Munich** Germany  
Master of Data Engineering and Analytics 03.2022 – 03.2025
- **German University in Cairo** Egypt  
Bachelor of Computer Engineering; GPA: 0.9 (top 5%) 09.2016 – 07.2021

## EXPERIENCE

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- **Zeiss** Munich, Germany  
Working Student, MLOps 09.2022 - 09.2024
  - Implemented and deployed an internal Python package for project management and querying; streamlined workflows and automated dashboard creation in under 5 minutes using Azure DevOps pipelines.
  - provisioned secure, private Azure workspaces using Terraform, enhancing infrastructure security and improving deployment times.
  - Deployed RAG solution to build Team Wiki Chat via Azure AI, reducing the time to get the needed info from the wiki to 1 minute.
- **Helmholtz Munich** Munich, Germany  
Research Assistant, Computational Health Center 10.2022 - 04.2023
  - Implemented customized integrated gradients for single-cell data.
  - Conducted comprehensive attribution score analysis and created detailed visualizations; enhanced team understanding of attribution methods' outputs.
- **Rocket Internet SE - Tallah** Dubai, UAE  
Data Science Intern 11.2021 - 04.2022
  - Designed and implemented an efficient ETL process, delivering weekly data analysis reports, creating insightful visualizations, and performing customer clustering to enhance data-driven decision-making.
  - Introduced and defined key performance metrics to evaluate and optimize each stage of the customer purchasing funnel.
- **Stuttgart University** Stuttgart, Germany  
Research Assistant - VIS Institute 11.2021 - 04.2022
  - Implemented SOTA deep learning multi-modal systems from a leading paper in emotion recognition with a new proposed set of gaze features. <https://dl.acm.org/doi/pdf/10.1145/3530879>

## PROJECTS

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- **Arabic Poetry Generator**
  - Collected 55k Arabic poems, organized by era, type, and poet name. dataset.
  - Built an Arabic poetry generator by implementing a character-level LSTM-based language model.
- **Technical blogging**
  - Introductory Guide For Triplet Loss Function
  - Non-Causal Associations: Reasons and Examples

## PROGRAMMING SKILLS

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- **Languages:** Python, SQL, Java, Javascript, R
- **Technologies:** resumeAirflow, Pytorch, Tensorflow, Postgres, Azure, Git, Docker, Terraform, Spark, CI/CD, React

## SCHOLARSHIPS

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- **MDSI:** Munich Data Science Institute. MDSI

## PUBLICATIONS

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- Abdou, Ahmed, et al. "Gaze-enhanced Crossmodal Embeddings for Emotion Recognition." Proceedings of the ACM on Human-Computer Interaction 6.ETRA (2022): 1-18. Tags: Deep Learning.  
<https://dl.acm.org/doi/pdf/10.1145/3530879>
- Mind Your Neighbours: Leveraging Analogous Instances for Rhetorical Role Labeling for Legal Documents.  
arXiv preprint [arXiv:2404.01344](https://arxiv.org/abs/2404.01344).
- Abdou, Ahmed, et al. "mucAI at WojoodNER shared task: Arabic Named Entity Recognition with Nearest Neighbor Search" Arabic NLP 2024.