

MOHAMED A. ABDELHADY

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Github  ♦ Linked in  ♦ Medium 

EXPERIENCE

Adyen

June 2021 - present


Tech Lead - Machine Learning

- Lead a team of 10 professionals comprising of data scientists, data analysts, and data engineers.
- Spearhead research and development of machine learning-driven products for external and internal fraud detection use cases, as well as anti-money laundering (AML) applications.
- Develop and deploy graph-based machine learning models, leading to a significant increase in the precision of fraud detection products and help saving platforms >€2.5M.
- Successfully growing and upskilling the team, and introducing workflows to ensure data governance, software development best practices, and healthy collaborative environment resulting in a more efficient and robust pipelines.

Fourthline

Aug. 2019 - June 2021

Computer Vision & Machine Learning Engineer

- Development and monitoring of data annotation strategy, ETL pipelines, and training frameworks for deep learning models to achieve end-to-end identity document authentication and provide calibrated risk scores. Improving the human baseline fraud detection f1-score by 2%.
- Research and develop frameworks for uncertainty estimation, unsupervised learning, and generative modeling to improve fraud detection capabilities.
- Develop, deploy, and maintain optimized Python APIs for serving ML models as well as monitoring framework .

ASML

June 2018 - July 2019

Software Design Engineer

- Develop model-driven software components and algorithms for new machine modules.
- Implemented data visualization pipelines to verify new motion algorithms.
- Develop a code analysis tool to inspect illegal interfaces that reduced development time.

Magazino GmbH

Sep. 2017 - May 2018

Robotics Software Developer

- Lead the technical onboarding and deployment of autonomous fleets at 2 intra-logistics warehouses.
- Develop navigation algorithms based on topological graphs for multi-robot applications.
- Create a robot-in-the-loop testing pipeline to improve the integration and validation process.


EDUCATION

University of Twente

Sep. 2015 - Aug. 2017

MSc in Robotics & Mechatronics - Full Scholarship

Cum Laude. CGPA: 8.5 / 10

Thesis: "Modular SLAM Framework using Component-based Approach" 

German University in Cairo

Sep. 2009 - July 2014

BSc in Mechatronics - Partial Scholarship

Cum Laude. CGPA: 1.4 / 1.0

fortiss GmbH - Technical University of Munich

Feb. 2013 - Aug. 2013

BSc thesis: "Probabilistic Sensor Data Fusion for a Quadrotor"

GPA: 1.1 / 1.0

SKILLS

Languages

Python, SQL, Bash

Tools & Frameworks

TensorFlow, Keras, Pytorch, Git, PySpark, Pandas, Flask, Docker

PROJECTS

Reinforcement learning approach for traffic lights optimization (2nd place in C4F2 Hackathon) [↗](#)

Monitoring of Tensorflow models using Prometheus, metricbeat, and Kibana/Grafana

Reproducibility of fine-grained-image-classification attention approaches (deprecated) [↗](#)

Pedestrian detection and tracking using FCNs (deprecated) [↗](#)

Kaggle terrain classification using IMU - Top 6% [↗](#)

Python packages for robotics algorithms and autonomous navigation (contributor) [↗](#)

Visual navigation for a mobile robot using monocular vision [↗](#)

Bond graph modeling of a gimbaled-thrust rocket [↗](#)

Localization framework for a rail-guided robot [↗](#)

PUBLICATIONS

Reuse-oriented SLAM Framework using Software Product Lines [↗](#)

2020

IEEE International Conference on Robotic Computing (IRC)

Authors: **Mohamed A. Abdelhady**, Douwe D. Dresscher, Jan F. Broenink

Learning A Recurrent Neural Network for State Estimation using Filter Data [↗](#)

2019

Intelligent Vehicles Symposium (IV)

Authors: Ahmed M. Hammam, **Mohamed A. Abdelhady**, Omar Shehata

Demo Design: The VIRO Agile Eye [↗](#)

2018

DSPE Mikroniek magazine, Volume 58, Issue 1

Authors: Louis Stijn, **Mohamed A. Abdelhady**, Samer Abdelmoeti

Multi-robot Task Allocation for Search and Rescue Missions [↗](#)

2014

European Workshop on Advanced Control and Diagnosis

Authors: A. Hussein, **Mohamed A. Abdelhady**, M. Bakr, Omar Shehata, Alaa Khamis

EXTRA-CURRICULAR

Team strategy developer at ASML's robocup team using behavior trees.

Judge at the minesweeper robotics competition for humanitarian de-mining.

Makerspace developer at the University of Twente.

Part-time junior teaching assistant for CAD labs.

ACM workshops participant

AIESEC Munich talent developer.