

# Mohammad Mahdi Maghouli

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## Education

### B.Sc in Computer Engineering

SHAHID BEHESHTI UNIVERSITY

Tehran, Iran

Sept. 2017 - Expected Feb. 2022

- CGPA: 3.54/4

## Relevant Work Experience

### Data Engineer and ML Developer (Remote)

Manchester, UK

SAFE STREAM LTD 🌐

Jul 2020 - Aug 2021

- Developed a **large scale (more than 10,000 classes), imbalance, and accurate** object detector with the help of ResNet and Markov models.
- Development of a domestic web application to **semi-automatically label data** using React, Django, and Postgresql.
- Developed a super-fast E-commerce web application to make the **entire grocery store online** based on the **store's shelf images**
- Developed a Vision-Based Quality Control system for production lines. (especially to detect anomalies and defects)

### Founder and Developer

Tehran, Iran

MOFID EDUCATION CHAMPION (MECH)

Nov 2012 - Sep 2016

- Developed an **online course provider** specifically for high school students in Iran. (Similar to Udemy)
- Developed an educational **Desktop application** using Java and JavaFX.

## Internship

### Safe Stream LTD 🌐

Manchester, The UK

COMPUTER VISION R&D

Apr 2020 - Jul 2020

- Analyzed several papers in the field of Computer vision (including image segmentation and large-scale object recognition).
- Developed object detectors based on **Yolo, CNN, R-CNN and faster R-CNN algorithms**

### DigiKala-Next Winter AI Bootcamp 🌐

Tehran, Iran

DIGIKALA-NEXT

Dec 2019 - Feb 2020

- Developed an ensemble model to detect fraud comments and pursued professional education within the field of NLP.

## Skills

<b>Programming Languages</b>	Java, Python, C/C++, MATLAB
<b>ML Toolkit</b>	Tensorflow, Keras, Pytorch, scikit-learn
<b>Frameworks</b>	React, Flask, MATLAB and Simulink
<b>Libraries</b>	pandas, NumPy, Matplotlib, CV2, Pillow
<b>Databases</b>	MySQL, PostgreSQL
<b>Developer Tools</b>	Git, Docker, Amazon AWS, Elasticsearch, Kibana

## Selected Projects

### Detect explicit content in videos (Fight and Alcohol Detection) 🌐

PYTHON, PYTORCH,

Fall 2020

- Developed a model to detect **explicit content** (such as alcohol use and fight scenes) in **movie** frames with an accuracy of **more than 97%** using the **ResNet**
- Employed a **pace estimator** to increase fight detection accuracy

### Target Advertising, Audience classification 🌐

PYTHON, SCIKIT-LEARN

Spring 2020

- Developed and analysed machine learning models to classify and **target customers** using xgboost classifier.
- Done feature engineering and data visualization on over 40000 real estate data and developed models for targeting audiences.

### Document Classification

PYTHON, TENSORFLOW, SCIKIT-LEARN, BERT,

Fall 2020

- Using Deep Learning and Natural Language processing to classify more than 150,000 Persian news documents into six main classes and 25 sub-classes with 91% accuracy.

## Honors & Awards

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| 2021 | <b>Qualified for best CE Bachelor Thesis in spring semester 2021</b> , Shahid Beheshti University  | <i>Tehran, Iran</i> |
| 2017 | <b>Ranked in the Top 0.7% of participants out of 180,000 candidates</b> , Nationwide Iranian University Entrance Exam, Mathematics and Physics branch. | <i>Tehran, Iran</i> |
| 2020 | <b>Ranked 3<sup>rd</sup></b> , DigiKala, Fraud Detection Contest in Quera website.   | <i>Tehran, Iran</i> |
| 2020 | <b>Ranked 9<sup>th</sup> among 703 contestants</b> , Rahnema-Collage, Machine Learning Contest in Quera website.                                       | <i>Tehran, Iran</i> |

## Certifications

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| 2020 | <b>IEEE Certificate of Completion, Introduction to Deep Learning for Natural Language Processing</b> 📄, IKT2020                    |
| 2019 | <b>Participate in Asia Pacific Innovation Forum 2019: Technology Start-ups for Sustainable Development</b> 📄, United Nations ESCAP |
| 2015 | <b>TRIZ Methodology (Level B - 24 hours) Certificate of attendance</b> 📄, Altshuller Institute TRIZ                                |