Aref **Moradi**

MACHINE LEARNING ENGINEER

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Education

KTH and TU/e
Stockholm, Sweden

MASTER'S DEGREE IN DATA SCIENCE
Sep. 2018 - Aug. 2020

- First year TU/e, Second year KTH
- Attained EIT scholarship of excellence. Tuition fee waiver.

Amirkabir University of Technology
Tehran, Iran

B.S. IN SOFTWARE ENGINEERING
Sep. 2013 - Aug. 2018

- Top 3 Technical Universities in Iran

Work Experience

Klarna
Stockholm, Sweden

MACHINE LEARNING RESEARCH ENGINEER
January.2020 - Current

- Scaling and deploying ML models using AWS services (e.g. **AWS Lambda, AWS Batch**).
- Implemented offline dataset saving for **Reinforcement Learning** agent to allow offline training.
- Implemented **state-of-the-art graph neural network** algorithms to create a product-page-scraper.
- Keeping up with state-of-the-art publications by having routing paper reading sessions
- Creating efficient representations of web-pages to bootstrap training of RL agent.
- Designing and implementing data pipelines for pre-processing large amounts of **semi-structured** web page data into efficient tree data structures.
- Contributing to Klarna's open source **Web Traversal Library**.
- Extensive work with **PyTorch** and **Ray Tune** for hyperparameter tuning.
- Contribute in creating and maintaining **CI/CD** pipelines for our ML repositories using **Jenkins**.
- Major contributions to writing our **paper** on web page element classification.
- Master thesis on combining analytical and predictive deep learning models. (Master Thesis).

Klarna
Stockholm, Sweden

DATA ENGINEER
Aug.2019 - Dec.2019

- Worked on developing a data layer to give analysts access to user data in an efficient way using **AWS Redshift**.
- Worked with **Apache Airflow** to schedule and run jobs for data pre-processing.
- Developed developer tools **Docker** with the pre-installed packages to make analyst on-boarding easier.

CafeBazaar
Tehran, Iran

DATA ENGINEER - BIGGEST AD MARKETPLACE IN IRAN WITH MORE THAN 10 MILLION MONTHLY USERS.
Sep.2017 - Sep. 2018

- Implemented **Ad category classifier**.
- Analyzing and visualizing users patterns in Divar application.
- Implement, deploy and maintain **Spark** applications for various ETL pipelines.
- Maintain Spark, HDFS cluster and write jobs for cleaning huge amounts of data.
- Maintain and schedule jobs using **Apache Airflow**.
- Implemented Chat data clustering to be used for generating prepared messages.
- Design and analyze user funnel in chat application to allow data-driven decisions and determine business KPI's.
- Scrum master of chat team with great knowledge of agile scrum software processes.

CafeBazaar
Tehran, Iran

ANDROID DEVELOPER - BIGGEST AD MARKETPLACE IN IRAN WITH MORE THAN 10 MILLION MONTHLY USERS.
Aug. 2016 - Sep. 2017

- Divar Lead Android Client Developer and Software Engineer.
- Held up Android development workshops for the other team members.
- Designed, developed and published ad acquisition multi-platform chat client with more than 10 million users.
- Worked with RxJava and event driven programming for implementing real-time chat application.
- Extensive knowledge and passion in **OOP** best practices and writing **clean and maintainable** code.

SpotYet   *Stockholm, Sweden*

Software Developer - Slackbot for remote connections

- SpotYet is a Slackbot for randomly matching people in Slack channels with fun ice-breakers.
- One of the 6 co-founders.
- Back-end development using AWS. Specifically **AWS Lambda** and **DynamoDB**.
- Minor contributions in front-end development in **React**.
- Currently being used by more than 40 companies without any advertisement.

Research Experience

Klarna   *Stockholm, Sweden*

Web Automation Research Team

- Contributed to the paper: **The Klarna Product Page Dataset: A Realistic Benchmark for Web Representation Learning**
- Worked in collaboration with IVL to create a carbon emissions estimator model for textile products as part of my master thesis: **Combining Learned and Analytical Models for Predicting CO2e Emissions in Textile Products**

Institute for Cognitive Sciences Studies   *Tehran, Iran*

Internship   *Aug. 2017 - Sep. 2017*

- Worked with **fNIRS** brain imaging device for analyzing brain signals of finger tapping.
- Translated and edited a Persian manual to be used by future students of the institute.

Skills

Programming Languages

- Python, SQL, Java

Tools and Libraries

- PyTorch, AWS, Docker, Spark, TensorFlow, Android Development

Certificates

TOEFL   *Nov. 2021*

iBT

- Reading: 29 Listening: 30 Speaking: 30 Writing: 29 Total: 118

GRE   *Oct. 2017*

General test

- Quantitative Reasoning: 167/170, Verbal Reasoning: 154/170, Analytical Writing: 5/6