

Aref Moradi

MACHINE LEARNING ENGINEER

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Education

KTH and TU/e

MASTER'S DEGREE IN DATA SCIENCE

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

Stockholm, Sweden

Sep. 2018 - Aug. 2020

Amirkabir University of Technology

B.S. IN SOFTWARE ENGINEERING

- Top 3 Technical Universities in Iran

Tehran, Iran

Sep. 2013 - Aug. 2018

Skills

Programming Languages

- Python, SQL, Bash, Java

Tools and Libraries

- PyTorch, Pytorch Lightning, AWS, Docker, Spark, Airflow, TensorFlow

Theory

- Linear Algebra, Reinforcement Learning, Statistical Machine Learning

Work Experience

Klarna

MACHINE LEARNING ENGINEER - FULL TIME

Stockholm, Sweden

January 2020 - Current

- Designed and developed model training and deployment pipelines using **Jenkins** and **AWS services** (e.g., AWS Lambda, AWS Sage-maker, AWS SQS)
- Researched, evaluated and developed SOTA **Computer Vision** and **NLP** models for ad content tagging, creation and moderation
- Trained, evaluated and deployed image moderation model with **0.9 F1-score**
- Improved inference times of moderation models by **50%** using appropriate **micro-service architectures** and **concurrency** in Python (**asyncio**)
- Facilitated the **on-boarding of 3 senior data scientists** by **leading** the establishment and documentation of service specifications, team coding practices, and team guidelines
- Led team ML engineering efforts by ensuring high code quality and performance which has led to **2 domain-wide recognitions**
- Implemented and evaluated the **FreeDOM** model from scratch and achieved a **0.95 F1-score** (Highest performance on average between evaluated models) which was a major part of the team research **paper**
- Reduced training time of models by **60%** by using **IO optimizations** and **GPU training**
- Moderated weekly paper reading sessions to keep updated with state-of-the-art research
- Refactored **Reinforcement Learning** powered agent for performing tasks over the web (**DQN**) to reduce the development time for adding novel policies
- Designed and automated data pipelines for pre-processing **semi-structured** web page data into efficient tree data structures that enabled easy filtering of data based on language
- Wrote research proposals which were awarded with **1 research grant** and **1 patent filing**
- Improved functionality and fixed bugs in Klarna's open-source Web Traversal Library

Klarna

Stockholm, Sweden

DATA ENGINEER - PART TIME

Aug. 2019 - Dec. 2019

- Researched and identified the needs of analysts in the domain which led to aggregating **terabytes of purchase data** into summary tables for simplified access
- Developed and maintained **ETL** pipelines using **Amazon Redshift**, **Spark** and **Airflow**
- Implemented developer tools with preinstalled requirements using **Docker** which sped up analyst on-boarding

CafeBazaar

Tehran, Iran

ANDROID DEVELOPER - BIGGEST AD MARKETPLACE IN IRAN WITH MORE THAN 10 MILLION MONTHLY USERS -

Aug. 2016 - Sep. 2017

PART-TIME

- Led the design and implementation of a real-time Android chat client for the purpose of connecting buyers and sellers in Divar which resulted in a **promotion**
- Collaborated with **cross-functional team of 6 people** to ensure on-time delivery of chat feature (The whole process from ideation to deployment took **9 months**)
- **Mentored** junior Android Developer which resulted in delegating major tasks after **6 months** and completely taking over the Android client after deployment
- Designed and built modular code components using RxJava, event-driven programming, and android frameworks such as MVP
- Experienced in **OOP** best practices and writing **clean and maintainable** code

SpotYet

Stockholm, Sweden

CO-FOUNDER & FULLSTACK DEVELOPER - SLACKBOT FOR REMOTE CONNECTIONS

- SpotYet is a Slackbot for randomly matching people in Slack channels with fun ice-breakers and is currently used by more than **50 Slack work-spaces**
- Back-end development using AWS services such as **AWS Lambda** and **DynamoDB** and minor front-end development using **React**
- Identified customers' needs and business decisions for the SpotYet and SpotBot product
- Scrum master of a team of 6 people and ensured organized and routine team meetings

Research Experience

Klarna

Stockholm, Sweden

WEB AUTOMATION RESEARCH TEAM

- Co-authored **The Klarna Product Page Dataset: A Realistic Benchmark for Web Representation Learning**
- Collaborated with IVL to create a carbon emissions estimator model for textile products as part master thesis internship: **Combining Learned and Analytical Models for Predicting CO2e Emissions in Textile Products**

Institute for Cognitive Sciences Studies

Tehran, Iran

INTERNSHIP

Aug. 2017 - Sep. 2017

- Analyzed brain signals of finger tapping using the **fNIRS** brain imaging device
- Translated and edited a Persian manual for future students of the institute

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