Pooya Moradi

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EDUCATION Simon Fraser University, Canada

Master of Science in Computer Science GPA 4/4

University of Tehran, Iran

Sep 2012 - Sep 2016

Sep 2018 - Jun 2020

Bachelor of Science in Computer Engineering

GPA 17.5/20

RESEARCH EXPERIENCES NatLang Lab, Simon Fraser University

Sep 2018 - Sep 2020

Graduate Research Assistant

- Thesis: Training with Adversaries to Improve Faithfulness of Attention in Neural Machine Translation
- Worked on interpretability of attention mechanism in sequence-to-sequence models.

IIS Lab, University of Tehran

2014 - 2015

Undegraduate Research Assistant

- Worked on predicting user engagement in social media via multi-task learning.

PUBLICATIONS

- P. Moradi, N. Kambhatla, and A. Sarkar. Confidential. Submitted to AACL 2020.
- P. Moradi, N. Kambhatla, and A. Sarkar. Interrogating the Explanatory Power of Attention in Neural Machine Translation. EMNLP 2019 Workshops(WNGT).
- H. Zamani, **P. Moradi**, and A. Shakeri. Adaptive User Engagement Evaluation via Multitask Learing. SIGIR 2015.
- H. Zamani, A. Shakeri, **P. Moradi**. Regression and Learning to Rank Aggregation for User Engagement Evaluation. ACM RecSys Workshops 2014.

WORK EXPERIENCES

Microsoft

Mar 2020 - May 2020

Applied Research Scientist Intern

Large scale image super-resoluton.

- Did literature review on deep learing based image super-resolution.
- Training large-scale Transformer-based models for super-resolution on Bing images.
- Proposed various methods to increase PSNR in Transformer-based models for super-resolution.

Resid Sep 2017 - Sep 2018

 $Software\ Engineer$

The first P2P mobile payment app in Iran

- Designed APIs to provide a mobile wallet for P2P payments.
- Migrated a on-production codebase and db schema to a new model with near-zero downtime.
- Was responsible for handling tickets/bugs is sued by the support team.
- Became an interviewer for Software Engineer position.

Divar Mar 2016 - Sep 2017

Software Engineer

Biggest classified advertising service in Iran with more than 10M queries per day.

- Extracted search core from a giant monolithic codebase and moved it to a new Dockerized Microservice-based environment and finally on Kubernetes.
- Implemented semantic analysis microservices specialized for Persian language to extract semantic attributes from ads and search queries. Increased recall by 7%.
- Analyzed 500M action logs via Spark to come up with solutions enhancing OKR metrics.
- Implemented various microservices in a RabbitMQ-based environment to fetch ads, repopulate, index and query the Elasticsearch database.
- Was responsible for code review, maintenance and DevOps of the search stack.

Taskulu Sep 2013 - Sep 2014

 $Software\ Engineer$

Task management platform.

- Designed and implemented various APIs for the Backbone.js frontend.
- Wrote various unit and integration tests for APIs.

PROJECTS

- Future Sales Prediction: Used collaborative filtering, XGBoost and CNNs to predict future sales of a market (2019). scikit-learn, pandas
- An improved attention model for simultaneous machine translation (2018). DyNet
- Attentive Image Colorization via attention-augmented cyclic GAN (2018). Tensorflow
- A compiler (syntax & semantic analyzer and code generator) for a language (2015). Java
- Linux Kernel Scheduler: a multi policy process scheduler for the Linux kernel (2015). C

TECHNOLOGIES

- C++, Ruby, and Python (> 10K lines); Java(> 1K lines).
- (Django; Ruby on Rails) (Postgresql; Elasticsearch; Redis; RabbitMQ) (Docker; Kubernetes) (Scikit-Learn; PyTorch) Git.

HONORS & AWARDS

- Was awarded **Graduate Fellowship** for my MSc (2018).
- Honored Alumni of my BSc (2016).
- Ranked 5th out of 36 teams in ACM RecSys Challenge (2014).