Pooya Moradi

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EDUCATION

Simon Fraser University, Canada   Sep 2018 - Mar 2020
Master of Science in Computer Science
GPA 4/4

University of Tehran, Iran   Sep 2012 - Sep 2016
Bachelor of Science in Computer Engineering
GPA 17.5/20

RESEARCH EXPERIENCES

NatLang Lab, Simon Fraser University   Sep 2018 - Now
Graduate Research Assistant
- Worked on interpretability of attention mechanism in sequence-to-sequence models.
- Did literature review on *under and over translation* problem in neural machine translation.

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 ACL 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 Multi-task 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

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 issued 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.

TEACHING

- Design and Implementation of Compilers (2019)
- Design and Analysis of Algorithms (2016)
- Advanced Programming (2015, 2016)
- Data Structures & Algorithms (2015, 2016)

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).