Pooya Moradi

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EXPERIENCE

Microsoft Canada
Applied Scientist (Turing team) *Aug 2020 - Present*
- Designed, trained, distilled and deployed various robust deep neural models for automatic glossary creation from millions of enterprise text documents.
- Was in charge of leading the science aspect including converting high-level ambiguous business requirement into narrowed-down technical milestones in a cross-org collaboration.
- Helped to optimize one of our pipelines to reduce processing time from multiple days to 10 hours and memory requirement from 1TB to 200GB by discovering and improving performance and memory bottlenecks.

Microsoft USA
Applied Scientist Intern (Turing team) *Mar 2020 - May 2020*
- Large-scale image super-resolution: **Kick-started a project that is now part of the Edge browser beta**. Did literature review on image super-resolution problem, trained various Transformers-based model for it and proposed various techniques for model improvement.

Simon Fraser University Canada
Researcher *Sep 2018 - Sep 2020*
- Worked on analyzing and improving interpretability of attention mechanism in deep sequence-to-sequence models. Published two papers into **top tier conferences** (e.g. EMNLP).

Resid Iran
Software Engineer *Sep 2017 - Sep 2018*
- Was responsible for **design and implementation of architecture** and back-end APIs for the first P2P mobile payment solution in Iran.
- Migrated a live code-base and database schema to a completely new one with near-zero downtime

Divar Iran
Software Engineer (Search & AI) *Mar 2016 - Sep 2017*
- Implemented various machine learning microservices for semantic information extraction from search queries and ads. **Increased search recall by 7%** .
- Worked on the largest classified ads platform in Iran: **Led the effort of extracting search stack** from a giant monolithic codebase and converting it into various dockerized microservices deployed on kubernetes.
- Designed a fault-tolerant and scalable microservice architecture on top of rabbitmq and elasticsearch, which later **served 10M queries per day.**

Taskulu Iran
Software Engineer *Aug 2013 - Aug 2014*
- Contributed to design and development of the backend of a project management platform startup.
- Improved response time of the web app by 20% by efficient use of cache hierarchy ranging from database-level caching to application-level Redis-based caching

PUBLICATIONS

- **P. Moradi**, N. Kambhatla, and A. Sarkar. *Measuring and improving faithfulness of attention in neural machine translation.* EACL 2021
- **P. Moradi**, N. Kambhatla, and A. Sarkar. *Interrogating the Explanatory Power of Attention in Neural Machine Translation.* EMNLP 2019 Workshops.
- 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

EDUCATION

Simon Fraser University Burnaby, Canada
Master of Science - Computer Science *Sep 2018 - Sep 2020*
Thesis: *Improving interpretability of attention mechanism in sequence-to-sequence models.*

University of Tehran Tehran, Iran
Bachelor of Science - Software Engineering *Sep 2013 - Sep 2017*