

Alireza Salemi

Manning College of Information and Computer Sciences, University of Massachusetts, Amherst, MA, USA

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Education

University of Massachusetts Amherst

PhD in Computer Science

Massachusetts, USA

Sep. '24 - Current

- Received PhD Candidacy with **Distinction**
- GPA: 3.9/4.0

University of Massachusetts Amherst

MSc in Computer Science

Massachusetts, USA

Sep. '22 - Sep. '24

- Courses: Information Retrieval, Computer Vision, Adv. Natural Language Processing, Neural Networks, Information Assurance, Algorithms, Adv. Information Retrieval.
- GPA: 3.9/4.0

University of Tehran

BSc in Computer Engineering

Tehran, Iran

Sep. '17 - Feb. '22

- **Ranked 1st** among 103 Computer Engineering students
- GPA: 19.60/20.0 (4.0/4.0)

Interests

Natural Language Processing Text Generation, Visual Question Answering, Personalization, Retrieval-Augmented Generation.

Neural Information Retrieval Multi-modal Retrieval, Retrieval-Enhanced Machine Learning, Dense Retrieval.

Publications [Link]

LaMP-QA: A Benchmark for Personalized Long-form Question Answering

Under Review in EMNLP '25

Alireza Salemi, Hamed Zamani

Personalized Generation In Large Model Era: A Survey

ACL '25

Yiyan Xu, Jinghao Zhang, **Alireza Salemi**, Xinting Hu, Wenjie Wang, Fuli Feng, Hamed Zamani, Xiangnan He, Tat-Seng Chua

Plan-and-Refine in RAG: Generating Diverse and Comprehensive Responses through Global Exploration and Local Exploitation

Under Review in NeurIPS '25

Alireza Salemi, Chris Samarin, Hamed Zamani

ExPerT: Effective and Explainable Evaluation of Personalized Long-Form Text Generation

ACL '25 Findings

Alireza Salemi, Julian Killingback, Hamed Zamani

Reasoning-Enhanced Self-Training for Long-Form Personalized Text Generation

Under Review in EMNLP '25

Alireza Salemi, Cheng Li, Mingyang Zhang, Qiaozhu Mei, Weize Kong, Tao Chen, Zhuowan Li, Michael Bendersky, Hamed Zamani

Beyond Factual Accuracy: Evaluating Coverage of Diverse Factual Information in Long-form Text Generation

ACL '25 Findings

Chris Samarin, Alexander Krubner, **Alireza Salemi**, Youngwoo Kim, Hamed Zamani

Accelerating Retrieval-Augmented Generation

ASPLOS '25

Derrick Quinn, Mohammad Nouri, Neel Patel, John Salihu, **Alireza Salemi**, Sukhan Lee, Hamed Zamani, Mohammad Alian

Learning to Rank for Multiple Retrieval-Augmented Models through Iterative Utility Maximization

Alireza Salemi, Hamed Zamani

Under Review in ICTIR '25

Comparing Retrieval-Augmentation and Parameter-Efficient Fine-Tuning for Privacy-Preserving Personalization of Large Language Models

Alireza Salemi, Hamed Zamani

Under Review in ICTIR '25

Retrieval-Enhanced Machine Learning: Synthesis and Opportunities

To Eun Kim, **Alireza Salemi**, Andrew Drozdov, Fernando Diaz, Hamed Zamani

Under Review in IRRJ

LongLaMP: A Benchmark for Personalized Long-form Text Generation

Ishita Kumar, Snigdha Viswanathan, Sushrita Yerra, **Alireza Salemi**, Ryan Rossi, Franck Dernoncourt, Hanieh Deilamsalehy, Xiang Chen, Ruiyi Zhang, Shubham Agarwal, Nedim Lipka, Hamed Zamani

Under Review in TKDD

LaMP: When Large Language Models Meet Personalization

Alireza Salemi, Sheshera Mysore, Michael Bendersky, Hamed Zamani

ACL '24

Optimization Methods for Personalizing Large Language Models through Retrieval Augmentation

Alireza Salemi, Surya Kallumadi, Hamed Zamani

SIGIR '24

Towards a Search Engine for Machines: Unified Ranking for Multiple Retrieval-Augmented Large Language Models

Alireza Salemi, Hamed Zamani

SIGIR '24

Evaluating Retrieval Quality in Retrieval-Augmented Generation

Alireza Salemi, Hamed Zamani

SIGIR '24

Best Short Paper

Pre-Training Multi-Modal Dense Retrievers for Outside-Knowledge Visual Question Answering

Alireza Salemi, Mahta Rafiee, Hamed Zamani

ICTIR '23

A Symmetric Dual Encoding Dense Retrieval Framework for Knowledge-Intensive Visual Question Answering

Alireza Salemi, Juan Altmayer Pizzorno, Hamed Zamani

SIGIR '23

Best Student Paper

PEACH: Pre-Training Sequence-to-Sequence Multilingual Models for Translation with Semi-Supervised Pseudo-Parallel Document Generation

Alireza Salemi, Amirhossein Abaskohi, Sara Tavakoli, Yadollah Yaghoobzadeh, Azadeh Shakery

LoResMT @ EACL '23

ARMAN: Pre-training with Semantically Selecting and Reordering of Sentences for Persian Abstractive Summarization

Alireza Salemi, Emad Kebriaei, Ghazal Neisi Minaei, Azadeh Shakery

EMNLP '21

UTNLP at SemEval-2021 Task 5: A Comparative Analysis of Toxic Span Detection using Attention-based, Named Entity Recognition, and Ensemble Models

Alireza Salemi, Nazanin Sabri, Emad Kebriaei, Behnam Bahrak, Azadeh Shakery

SemEval @ ACL '21

Research Experience

Student Researcher at Google Cloud

Under supervision of Hamid Palangi

Google Cloud AI

Jun. '25 - Feb '26

- Working on optimizing reasoning path in retrieval-augmented generation with natural language feedback.

Student Researcher at Google DeepMind Under supervision of Cheng Li and Mingyang Zhang <ul style="list-style-type: none"> Working on Personalizing Large Language Models using reinforcement learning, self-training, inference-compute scaling, reasoning, and pluralistic alignment. 	Google DeepMind Jun. '24 - May '25
Data Science Intern at Lowe's Under supervision of Surya Kallumadi <ul style="list-style-type: none"> Working on personalizing large language models by optimizing retrievers with reinforcement learning from language model's feedback. 	Lowe's May '23 - Aug. '23
Research Assistant at the Center for Intelligent Information Retrieval Under supervision of Hamed Zamani <ul style="list-style-type: none"> Working on Retrieval-Enhanced Machine Learning (REML), Retrieval-Augmented Generation (RAG), Multi-modal Knowledge-intensive Tasks, and Personalizing Large Language Models. 	UMass Amherst Sep. '22 - Current
Research Assistant at Information Retrieval Labratory Under supervision of Azadeh Shakery and Yadollah Yaghoobzadeh <ul style="list-style-type: none"> Working on designing a pre-training objectives for multi-lingual and summarization language models. 	University of Tehran Jan. '21 - Sep. '22
Research Assistant at Data Analysis Laboratory Under supervision of Azadeh Shakery and Behnam Bahrak <ul style="list-style-type: none"> Working on designing a system for annotating toxic (hate speech) spans of a piece of text. 	University of Tehran Aug. '20 - Feb. '21

Work Experience

Sotoon Natural Language Processing Data Scientist <ul style="list-style-type: none"> Working on an AutoML system for text classification, with a focus on sentiment analysis of customer's reviews and automatically acceptance/rejection of users' comments. 	Tehran, Iran Nov. '21 - Aug. '22
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Professional Services

SIGIR'25	Organized a Tutorial on Retrieval-Enhanced Machine Learning: Synthesis and Opportunities in The 48th International ACM SIGIR Conference on Research and Development in Information Retrieval.
ICTIR'25	PC Member for The 11th ACM SIGIR / The 15th International Conference on Innovative Concepts and Theories in Information Retrieval.
ACL'25	Reviewer for The 63rd Annual Meeting of the Association for Computational Linguistics.
SIGIR'25	PC Member for The 48'th International ACM SIGIR Conference on Research and Development in Information Retrieval.
SIGIR-AP'24	Organized a Tutorial on Retrieval-Enhanced Machine Learning: Synthesis and Opportunities in The 2'nd International ACM SIGIR Conference on Information Retrieval in the Asia Pacific.
SIGIR-AP'24	PC Member for The 2'nd International ACM SIGIR Conference on Information Retrieval in the Asia Pacific.
ACL'24	Reviewer for The 62nd Annual Meeting of the Association for Computational Linguistics.
SIGIR'24	PC Member for The 47'th International ACM SIGIR Conference on Research and Development in Information Retrieval.
LLM-IGS'24	PC Member for The 1st and 2nd Workshop on Large Language Models for Individuals, Groups, and Society.
IMP'24	Mentoring MS Students in Industry Mentorship Program at UMass Amherst working on Personalizing LLMs in collaboration with industry mentors from Adobe.
ERSP'23-'24	Mentoring Undergrad Students in Early Research Scholar Program at UMass Amherst working on a research project about Unified Question Answering and Personalizing LLMs.
TOIS	Reviewer for ACM Transactions on Information Systems.
TKDE	Reviewer for IEEE Transactions on Knowledge and Data Engineering,

Achievements

'25	PhD Candidacy with Distinction , This title is given to a PhD candidate that shows an extraordinary performance in the comprehensive exam.	UMass Amherst
'24	The Best Short Paper Award @ SIGIR 2024 , The award is given to the best short paper in the SIGIR 2024 conference.	UMass Amherst
'23	The Best Student Paper Award @ SIGIR 2023 , The award is given to the best paper mainly written by a student.	UMass Amherst
'23, '25	W. Bruce Croft Scholarship , The scholarship is given to students whose research area is about information retrieval and natural language processing.	UMass Amherst
'22	UMass Amherst CICS Scholarship , The scholarship is given to some selected entering graduate students based on their application's merit.	UMass Amherst
'21	Best Thesis Award in Computer Engineering , BSc thesis was selected as the best thesis in the computer engineering department.	University of Tehran
'18-'20	University of Tehran Sponsors Foundation Top Student , This award is given to the top student at the computer engineering department.	University of Tehran
'17-'20	University of Tehran Scholarship , This scholarship is given to exceptional talents from the UT Sponsors Foundation.	University of Tehran
'18-'19	F.O.E (Faculty of Engineering) Award , The award is given to the top student among all of 103 Computer Engineering students.	University of Tehran

Invited Talks

May '25	Personalization in the LLMs Era , Talk about the state of personalization in generative AI system.	Google DeepMind
Apr. '25	Personalization in the LLMs Era , Talk about the state of personalization in generative AI system.	UMass Amherst
Dec. '23	Knowledge-Intensive VQA , Talk about Knowledge-Intensive Visual Question Answering.	QIAU
Oct. '23	When Large Language Models Meet Personalization , Talk about LaMP benchmark and personalizing LLMs.	UMass ML Club
May '23	When Large Language Models Meet Personalization , Talk about LaMP benchmark and personalizing LLMs.	Google Research

Teaching Experience

'20-'21	Artificial Intelligence , Head TA, Under supervision of Yadollah Yaghoobzadeh and Hakimeh Fadaei.	University of Tehran
'20-'21	Programming Languages and Compiler Design , Head TA, Under supervision of Fatemeh Ghassemi.	University of Tehran
'20-'21	The Theory of Formal Languages and Automata , TA, Under supervision of Hossein Hojjat.	University of Tehran
'20	Database Design , TA, Under supervision of Azadeh Shakery.	University of Tehran
'20	Design and Analysis of Algorithms , TA, Under supervision of Hamid Mahini.	University of Tehran
'19	Engineering Mathematics , TA, Under supervision of Mahdi Tale Masouleh.	University of Tehran

Languages

English	Fluent (TOEFL score: 113/120, Reading: 30, Listening: 28, Speaking: 26, Writing: 29)
Persian	Native proficiency