Ali Rahimi-Kalahroudi

http://alirahkay.github.io

Email : ali.rahimikalahroudi@gmail.com

ali-rahimi.kalahroudi@mila.quebec

RESEARCH INTERESTS

- Deep Model-Based Reinforcement Learning   Representation Learning
- (Latent) Planning   Self-Supervised Learning

EDUCATION

- **Université de Montréal / Mila**   Montréal, Canada
  Master of Science in Computer Science   *Jan. 2021 – Dec. 2023*
    - **Supervisor**: Prof. Sarath Chandar
    - **Thesis**: *Towards Adaptive Deep Model-Based Reinforcement Learning* (**Awarded Exceptional Grade**)
    - **GPA**: 4.22/4.3
    - **Coursework**: Representation Learning (A+), Continual learning (A+), Reinforcement Learning (A+), Self-supervised Representation Learning (A)

- **Sharif University of Technology**   Tehran, Iran
  Bachelor of Science in Computer Science   *Sep. 2015 – Sep. 2020*
    - **GPA**: 17.0/20

PUBLICATIONS   * DENOTES EQUAL CONTRIBUTION.

- *Replay Buffer with Local Forgetting for Adapting to Local Environment Changes in Deep MBRL*
  Rahimi-Kalahroudi, A., Rajendran, J., Momennejad, I., Van Seijen, H., and Chandar, S.
  Conference on Lifelong Learning Agents, **CoLLAs** 2023 *(Oral)*   (paper/code)
  (Also presented at: NeurIPS 2022 - Deep Reinforcement Learning Workshop)

- *Towards Evaluating Adaptivity of Model-Based Reinforcement Learning Methods*
  Wan, Y.*, **Rahimi-Kalahroudi, A.***, Rajendran, J., Momennejad, I., Chandar, S., and Van Seijen, H.
  International Conference on Machine Learning (**ICML**), 2022   (paper/code)
  (Also presented at: RLDM 2022 & ICLR 2022 workshop on ALOE (**Spotlight**))

RESEARCH EXPERIENCE

- **Mila**   Montréal, Canada
  Research Assistant   *Jan. 2021 – Present*
    - **Focus**: Deep Model-Based Reinforcement Learning
    - **Open Source**: Research framework for single/multi-agent RL algorithms. **RLHive** (code, docs)

- **Chair for CAMPAR**   Munich, Germany
  Undergraduate Research Assistant   *Summer 2019*
    - **Supervisor**: Prof. Dr. N. Navab
    - **Worked on**: 3D camera re-localization in changing indoor environments

HONORS AND AWARDS

- Awarded Exceptional Grade for the M.Sc. Thesis and Nominated for the Best Thesis Award (Top 1%)   2023
  Université de Montréal   Montréal, Canada
- Bourse D'excellence DIRO   *2022/2023*
  Université de Montréal   Montréal, Canada
- M.Sc. Tuition Exemption Scholarships (Bource C)   *2021*
  Université de Montréal   Montréal, Canada
- International Undergraduate Excellence Award   *2019*
  Chair for CAMPAR of Technical University of Munich   Munich, Germany
- Silver Medal   *2014*
  24th Iranian National Olympiad in Informatics(INOI)   Tehran, Iran

Working Experience

- **iCAD Dental**   Ottawa, Canada
  ML Research Developer (part-time)   *Jan. 2022 – May. 2022*
    - Designed a Python pipeline from scratch for the classification and clustering of dental objects and crowns.

- **CafeBazaar Inc.**   Tehran, Iran
  Data Scientist   *Sep. 2017 – Jan. 2021*
    - CafeBazaar is Iran's third-party android marketplace with **more than 40 million users.**
    - **Notable Contributions**:
        * Personalization Team:
            · Developed and implemented the app recommender system model.
            · Conducted A/B testing to validate improvements and devised a solution to diversify recommended app categories.
            · Increased the recommendation list's **install rate from 1.6% to 2.5%.**
        * Search-ads Team:
            · As a core founding member, led the data science, mechanism design, and optimization efforts of the team.
            · Designed the auction mechanism and systems for setting the reserved price, and profiling users. (Technical Report)
            · Through these efforts, the Search-ads team became one of the company's top three daily revenue generators.
        * Search Team:
            · Worked on the app ranking system and other NLP services such as the spell-checker and query suggestion.
            · Reduced the overall search **bounce rate from 41% to 35%.**

Teaching Experience

- **Sharif University of Technology**   Tehran, Iran
  Teacher Assistant   *2017 – 2018*
    - **Courses**: Advanced Programming, Data Structures

- **Iranian National Olympiad in Informatics**   Tehran, Iran
  Part of Scientific Committee for the Summer and Final Round Exams   *2016 – 2018*

- **High Schools**   Tehran, Iran
  Instructing Informatics Olympiad Materials   *2015 – 2018*

Volunteering Services

- **Reviewer:** ICML22, Neurips22, ICML23, CoLLAs23, and Neurips23.

Programming Skills

- **Languages**: Skilled in Python, Familiar with C++, Java, Scala, and LaTeX

- **ML and Data Science Tools**: Skilled in PyTorch, NumPy, Familiar with Tensorflow and JAX

- **Technologies**: Apache Spark, PySpark, and Hadoop, Docker, Singularity, and Slurm