PARHAM KAZEMI

pkazemi3@gmail.com   parham-k.github.io   github.com/parham-k   linkedin.com/in/p-kazemi

Keywords — Bioinformatics, Signal Processing, Natural Language Processing, Deep Learning
Skills — C++, Python, Java, PyTorch, Keras

EDUCATION

PhD Candidate in Bioinformatics - University of British Columbia   2021 - Present

MSc in Computer Engineering (AI) - University of Isfahan   2019 - 2021

- Thesis: Deep Reinforcement Learning for Training Intelligent Agents in Natural Language Environments
- GPA: 18.42/20

BSc in Computer Engineering (Software) - University of Isfahan   2015 - 2019

- Thesis: Predicting Persian Twitter Users' MBTI Personality Using Text Mining Methods
- GPA: 18.25/20 (highest in cohort)
- Attended ICPC West Asia Regionals 2016 and 2017
- Competed in Robocup IranOpen 2D Soccer Simulation League 2017
- Finalist at the National Computer Engineering Olympiad 2019

EXPERIENCE

Graduate Research Assistant - BC Cancer's Genome Sciences Centre   2021 - Present

- Member of the Bioinformatics Technology Lab (**birollab.ca**)
- 1 first-author publication, collaborated on 4 papers (to date)

Backend Developer and System Administrator - University of Isfahan   2018 - 2021

- Led the development of the University of Isfahan's Alumni Social Website (**alumni.ui.ac.ir**)
- Deployed and maintained as a Django app on a Linux server with nginx and uwsgi

Teaching Assistant - University of Isfahan   2016 - 2020

- Fundamentals of Computer Programming (C++) and Advanced Programming (Java/C++)
- Data Structures and Algorithm Design
- Artificial Intelligence (developed a game environment for evaluating final projects)
- Technical English for Computer Engineering

VOLUNTARY AND EXTRACURRICULAR WORK

Volunteer Organizer - Vancouver Bioinformatics User Group (**vanbug.org**)
2023 - Present
- Responsible for promoting monthly bioinformatics seminars by local and international speakers

ACM Students Chapter Member - University of Isfahan   2017 - 2019

- Coached 2 university teams at ICPC West Asia Regionals 2020
- Instructed Python and Django courses
- Assisted in technical setup for high school and undergraduate programming contests and AI challenges

PUBLICATIONS

Warren, R. L., Coombe, L., Wong, J., **Kazemi, P.**, & Birol, I. (2024). Human ancestry inference at scale, from genomic data. bioRxiv, 2024-03.

Coombe, L., **Kazemi, P.**, Wong, J., Birol, I., & Warren, R. L. (2024). Multi-genome synteny detection using minimizer graph mappings. bioRxiv, 2024-02.

Wong, J., **Kazemi, P.**, Coombe, L., Warren, R. L., & Birol, I. (11 2023). aaHash: recursive amino acid sequence hashing. Bioinformatics Advances, vbad162. doi:10.1093/bioadv/vbad162

Nikolić, V., **Kazemi, P.**, Coombe, L., Wong, J., Afshinfard, A., Chu, J., Warren, R. L., & Birol, I. (2022). btllib: A C++ library with Python interface for efficient genomic sequence processing. Journal of Open Source Software, 7(79), 4720. **doi.org/10.21105/joss.04720**

Kazemi, P., Wong, J., Nikolić, V., Mohamadi, H., Warren, R. L., & Birol, I. (2022). ntHash2: recursive spaced seed hashing for nucleotide sequences. Bioinformatics, 38(20), 4812–4813. **doi.org/10.1093/bioinformatics/btac564**

Kazemi, P., & Karshenas, H. (2021). Fuzzy Word Sense Induction and Disambiguation. IEEE Transactions on Fuzzy Systems, 30(9), 3918–3927. **doi.org/10.1109/tfuzz.2021.3133905**

PRESENTATIONS

Kazemi, P., Coombe, L., Warren, R. L., & Birol, I. (2024). AIEdit: Genome Assembly Polishing using Machine Learning and Spaced Seeds. Poster in BIG Research Day 24 (Vancouver, Canada)

Kazemi, P., Mohamadi, H., Chu, J., Coombe, L., Warren, R. L., & Birol, I. (2023). ntHits: streaming through raw sequencing data to profile and filter k-mers with selected multiplicities. Poster in the 13th RECOMB Satellite Conference on Biological Sequence Analysis (Istanbul, Turkey)

Kazemi, P. (2020). Natural language processing: what, how, and why. Presentation at the University of Isfahan's Annual Research Week (Esfahan, Iran)