Curriculum Vitae (C.V.)

Mohammad Saber Gholami

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RESEARCH INTERESTS	⋄ Algorithmic Graph Theory
	⋄ Modeling and Analysis of Large Complex and Social Networks
	⋄ Recommender Systems

EDUCATION

⋄ **Ph.D student in Computer Science**   Sept. 2019 – Present
Department of Computer Science and Software Engineering   **GPA: 4.2/4.3**
Concordia University, Montreal, Canada
SUPERVISOR: Prof. Hovhannes A. Harutyunyan
Thesis title: TBD

⋄ **M.Sc Degree in Computer Engineering**   Sept. 2017 – Sept. 2019
Department of Computer Engineering   **GPA: 17.83/20**
Amirkabir. University of Technology, Tehran, Iran
SUPERVISOR: Prof. Mohammad Reza Meybodi
Thesis title: Influence Maximization in Complex Networks Using Graph Coloring

⋄ **B.Sc Degree in Computer Engineering**   Sept. 2012 – Sept. 2016
Department of Computer Engineering   **GPA: 16.13/20**
K.N.Toosi. University of Technology, Tehran, Iran
SUPERVISOR: Prof. Amin Nikanjam
Thesis title: Implementation of 3D Bezier Curves to Move Virtual Cars in Driving Simulator

⋄ **High School Diploma in Mathematics and Physics**   Sept. 2008 – June 2012
Moallem Highschool, Tehran, Iran   **GPA: 19/20.00**

HONORS AND AWARDS

⋄ **Concordia International Tuition Award of Excellence**   Jan. 2020
Valued at $40k for 3 years (2020-2023).

⋄ **Gina Cody Scholarship**   Sept. 2019
Valued at $20k per year for 3 years (2019-2021).

⋄ **International Students Award of Excellence**   Sept. 2019
Valued at $17.5k per year for 3 years (2019-2021).

⋄ **Ranked top 10**   Sept. 2019
In class of 2018 among more than 25 software engineering master students.

⋄ **Ranked top 10**   Sept. 2017
In class of 2016 among more than 40 software engineering bachelor students.

⋄ **Ranked 109**   Jan. 2017
In the nationwide universities entrance exam for master's degree in software engineering among more than 30000 participants in Iran.

⋄ **Ranked 2144**   Sept. 2012
In the nationwide universities entrance exam among more than 260000 participants in Iran.

PUBLICATIONS

⋄ Journal papers:

- **Saber Gholami** and H. A. Harutyunyan. "A Genetic-based Approach for Broadcasting Using Universal Lists." *To be submitted*, 2021.

- **Saber Gholami** and H. A. Harutyunyan. "Optimal broadcasting in fully connected trees." *Submitted to Networks*, 2021.

· **Saber Gholami**, A.M.Saghiri, S. M. Vahidipour, and M.R.Meybodi, "HLA: A Novel Hybrid Model Based on Fixed Structure and Variable Structure Learning Automata". Journal of Experimental and Theoretical Artificial Intelligence, 2019 *(Under Review)*

◇ Conference papers:

· **Saber Gholami**, and Hovhannes A. Harutyunyan. "A Broadcasting Heuristic for Hypercube of Trees." In *2021 IEEE 11th Annual Computing and Communication Workshop and Conference (CCWC)*, pp. 0355-0361. IEEE, 2021.

· Bakhtar, Sahar, **Saber Gholami**, and Hovhannes A. Harutyunyan. "A New Metric to Evaluate Communities in Social Networks Using Geodesic Distance." In *International Conference on Computational Data and Social Networks*, pp. 202-216. Springer, Cham, 2020.

· Ebrahimi, A. Mohammad, **Saber Gholami**, Saeedeh Momtazi, M. R. Meybodi, and A. Abdollahzadeh Barforoush. "Correlation Analysis of Applications Features: A Case Study on Google Play." In *The 7th International Conference on Contemporary Issues in Data Science*, pp. 202-216. Springer, Cham, 2019.

ACADEMIC SERVICES	◇ Reviewer for International Journals

· The Journal of Supercomputing
· International Journal of Electrical Power & Energy Systems

TEACHING EXPERIENCE

◇ **Teaching Assistant**

Concordia University, Montreal, Canada

· COMP 352: Data Structure and Algorithms Instructor: P.Eng. Nora Houari	May - June 2021
· COMP 6411: Comparative Study of Programming Languages Instructor: P.Eng. P.Eng. C. Constantinides	May - June 2021
· COMP 352: Data Structure and Algorithms Instructor: P.Eng. Nora Houari	Jan. - Apr. 2021
· SOEN 331: Introduction to formal methods for software engineering Instructor: P.Eng. P.Eng. C. Constantinides	Jan. - Apr. 2021
· COMP 335: Introduction to Theoretical Computer Science Instructor: Prof. L. Narayanan	Sept. - Dec. 2020
· COMP 354: Software Engineering Instructor: P.Eng. C. Constantinides	Sept. - Dec. 2020
· SOEN 331: Intro to Formal Methods for Software Engineering Instructor: Dr. A. Jannatpour	Jan. - Apr. 2020

Amirkabir University of Technology, Tehran, Iran

· Algorithm design Instructor: Prof. A.R. Bagheri	Jan. - May 2018
· Data structure Instructor: Prof. A.R. Bagheri	Sept. - Dec. 2018

K.N.Toosi University of Technology, Tehran, Iran

· Algorithm design Instructor: Prof. A. Nikanjam	Fall 2015
· Automata theory, languages and computation Instructor: Prof. B. Nasersharif	Spring 2015
· Logic circuit Instructor: Prof. N. Manavizadeh	Spring 2014

RESEARCH EXPERIENCE	◇ **Graph Theory**, Concordia University SUPERVISOR: Hovhannes A. Harutyunyan · · · · · · · · · · · · · · Sept. 2019 – Present Working on diverse topics which includes, but is not limited to: Graph theory, Broadcasting, Broadcasting with Universal Lists, Genetic Algorithm, Social Networks, and Community Detection.

RESEARCH
EXPERIENCE

◇ **Graph Theory**, Concordia University
SUPERVISOR: Hovhannes A. Harutyunyan   Sept. 2019 – Present
Working on diverse topics which includes, but is not limited to: Graph theory, Broadcasting, Broadcasting with Universal Lists, Genetic Algorithm, Social Networks, and Community Detection.

◇ **Machine Learning**, Amirkabir University of Technology
SUPERVISOR: Ali.M. Saghiri   Mar. 2019 – Sept. 2019
Implementation of distributed Learning Automata in order to find the best features in a clustering application like text categorization.

◇ **Influence Maximization in Social Networks**, Amirkabir University of Technology
SUPERVISOR: Prof. M. Amir Haeri   Dec. 2017 – Aug. 2018

◇ **Influence Maximization in Complex Networks using Graph Coloring**, Soft Computing Lab, Amirkabir University of Technology
SUPERVISOR: Prof. M. Meybodi   Jan. 2017 – Sept. 2019

◇ **Natural Language Processing**, Amirkabir University of Technology
SUPERVISOR: Prof. S. Momtazi   Dec. 2017 – Aug. 2018
Classifying Google play applications with various techniques.

◇ **Information Retrieval**, Amirkabir University of Technology
SUPERVISOR: Prof. S. Momtazi   Sept. 2018 – Dec. 2018

◇ **Research Assistant in Virtual Reality Lab**, K.N.Toosi University of Technology
SUPERVISOR: Prof. A. Nikanjam   Sept. 2015 – Aug. 2016
Working on implementation of a 3D curve fitting model for simulating cars activities in VR Lab.

RELATED
COURSES

◇ **Concordia University**

Introduction to Artificial Intelligence (A), Algorithm Design and Techniques (A^+), Combinatorial Algorithms (A^+)

◇ **Amirkabir University of Technology**

Algorithms for Complex Network (17.15/20), Analysis Design of Algorithms (18.5/20), Statistical Natural Language Processing (18.03/20), Advanced Data Bases (20/20), Requirements Engineering (17.75/20), Seminar (19/20), Project (19.5/20).

◇ **K.N.Toosi University of Technology**

Advanced programming in Java (20/20), Discrete structures (16/20), Statistics and Probability (17.3/20), Logic circuits (20/20), Automata theory, languages and computation (18.75/20), Seminar (18.5/20), Algorithm design (18.3/20), Database design (19.72/20), System analysis and design (18.5/20), Operating systems (16.7/20), Introduction to cryptography (17/20), Compiler Design (18.75/20), Modern information retrieval (18/20), Multimedia Systems (16/20), Thesis (20/20)

OTHER
ACADEMIC
PROJECTS

◇ **Feature selection algorithm with LA** A feature selection algorithm with respect to Learning Automata with practical usage in Natural Language Processing, with Python, 2019.

◇ **IIS+** A Coloring-based algorithm for influence maximization in complex networks, with Python, 2019.

◇ **Implementation of an influence maximization algorithm** Implementation both IM algorithm and spread model (IC) in python, 2018.

◇ **Page rank and HITS algorithm implementation** Implementation of Page rank and HITS algorithms in python, 2018.

◇ **Recommender System** Implementation of both item-based and user-based recommender systems in Python, 2018.

◇ **Retrieval System** Implementation of a query retrieval system using TF-IDF matrix in Python, 2018.

◇ **Mobile Application Classification** Classification of Google play application, using various classifiers in Python, 2018.

- ◇ **Web Crawler** Implementation of a Google play crawler in python, 2018.
- ◇ **Context-dependent polarity disambiguation** Word sense disambiguation using Naive Bayes and SVM classifier in Python, 2018.
- ◇ **POS tagging, NER** Part Of Speech tagging with hidden Markov model, Name Entity Recognition in Python, 2018.
- ◇ **Feature selection algorithms implementation** Implementation of 3 feature selection algorithms (Chi-Square, Mutual Information, Information Gain) in Python, 2018.
- ◇ **Requirement engineering** An online book store system, requirement engineering phase, 2017.
- ◇ **Implementation of a bezier curve fitting algorithm** Implementation of a 3D curve fitting algorithm for moving virtual cars, 2016.

SKILLS
- ◇ Programming Languages: Python, Java, C, C++, Prolog
- ◇ Machine Learning: Scikit-learn, NumPy, SciPy
- ◇ Social Networks and Graph Technologies: Networkx, Gephi
- ◇ NLP technologies: Nltk
- ◇ Operating Systems: Windows, Linux(Ubuntu)
- ◇ Web Technologies: HTML, CSS, Javascript, JQuery, Bootstrap
- ◇ Document Preparation: LaTeX, Microsoft word

LANGUAGES
- ◇ Persian (native)
- ◇ English (fluent), IELTS (Overall band score: 7)(W:6.5 — S:7 — L:7 — R:7.5)

REFERENCES
- ◇ **Prof. Hovhannes A. Harutyunyan**
  Department of Computer Science and Software Engineering
  Concordia University, Montreal, Canada
  WEBSITE: https://users.encs.concordia.ca/ haruty/
  EMAIL: haruty@cs.concordia.ca
- ◇ **Prof. Saeedeh Momtazi**
  Department of Computer Engineering
  Amirkabir University of Technology, Tehran, Iran
  WEBSITE: http://ceit.aut.ac.ir/ momtazi/
  EMAIL: momtazi@aut.ac.ir
- ◇ **Prof. Alireza Bagheri**
  Department of Computer Engineering
  Amirkabir University of Technology, Tehran, Iran
  WEBSITE: http://ceit.aut.ac.ir/ bagheri/
  EMAIL: ar_bagheri@aut.ac.ir