

Nadia Ghobadipasha

+1 (778) 682 2104

✉ ngkobadi@sfu.ca

📄 ghobadipasha.com

🌐 [ngkobadi](https://www.linkedin.com/in/ngkobadi)

Technical skills

Programming	Python, Java, MATLAB, C++, HTML
Libraries	Pytorch, Tensorflow, Pandas
Platforms	Mac OS, Windows, Linux
Software	PyCharm, IntelliJ IDEA, Visual Studio, Spyder, Eclipse
Typesetting	TeX Studio, Microsoft Office

Work and Research Experience

- May 2019 – **Data Scientist: (Internship)**, *RBC Amplify, Royal Bank of Canada, Toronto, Ontario, Canada.*
- August 2019
- Working in a team of 4 at RBC Capital Market, consisting of 2 data scientists and 2 developers
 - 21 teams compete to build products to solve different business challenges in various RBC business segments
 - Our team works on Customer Relationship Management (CRM) data using deep learning and natural language processing techniques
 - Each team will pitch their final product to stakeholders at the August Amp Expo 2019
- Fall 2017 – **Research Assistant in *Natural Language Processing Lab***, *SFU, Burnaby, Canada.*
- Spring 2019
- Improving performance in word sense disambiguation using neural machine translation
 - Research on Named Entity Recognition (NER) using different word representation methods
- Supervisor: [Anoop Sarkar](#)
- Fall 2018 **Teaching Assistant of *Natural Language Processing (CMPT 825)***, *SFU, Burnaby, Canada.*
- Grading Python projects/exams and invigilating exams
Instructor: Anoop Sarkar
- Summer 2018 **Mentor for the program *Invent The Future: AI Scholars (AI4ALL)***, *SFU, Burnaby, Canada.*
- A two-week Summer artificial intelligence enrichment program for top grade 11 girls in Canada
 - Project mentor for the natural language processing group
 - Helping students in the NLP group create a Python program for the sentiment analysis of live Tweets
 - In 2018, six universities participated in AI4ALL: Boston University, CMU, SFU, Stanford, UC Berkeley, and Princeton. SFU is the first and only Canadian university participating in AI4ALL.
- Spring 2018 **Teaching Assistant of *Data Structures and Programming (CMPT 225)***, *SFU, Burnaby, Canada.*
- Supervising a lab of 50 students working on the C++ data structure assignments
Grading assignments and invigilating exams
Instructor: David Mitchell
- Spring 2018 **Teaching Assistant of *Introduction to Computing Science and Programming I (CMPT 120)***, *SFU, Burnaby, Canada.*
- Holding weekly office hours for students working on Python assignments
Grading assignments and invigilating exams
Instructor: Angelica Lim
- Spring 2016 **Teaching Assistant of *Foundations of Computer Science and Programming***, *University of Tehran, Tehran, Iran.*
- Designing Java homework & projects and grading
Instructor: Bagher BabaAli

Technical Projects

- Fall 2018 **Machine Learning (CMPT 726)**, *SFU, Burnaby, Canada.*
- Attention Mechanism for Image Colorization, developed in Python
- Explored the state-of-the-art deep learning methods for image colorization
 - Investigated attention mechanism for image colorization
 - Created a poster and presented at SFU AI Showcase in Vancouver
- Instructor: Greg Mori
- Spring 2018 **Illumination in Images and Videos (CMPT 829)**, *SFU, Burnaby, Canada.*
- Entropy minimization for Shadow Removal, developed in MATLAB
Instructor: Mark Drew

- Fall 2017 **Natural Language Processing (CMPT 725)**, *SFU, Burnaby, Canada.*
Word Segmentation, Phrasal Chunking, Word Alignment, Translation Decoding, and Automatic Evaluation in Python
Instructor: Anoop Sarkar
- Spring 2016 **Bachelor's Thesis**, *Department of Computer Science, University of Tehran, Tehran, Iran.*
Design of a Farsi Offline Handwritten Text Database
- Extracting different types of strokes and abundance of characters and their shapes from a large-scale Farsi data set using Python
 - Designing 600 paragraphs from 20 different subjects based on the statistics of characters and strokes extracted from the data. Also designed a unique paragraph which covered all the shapes of the Farsi characters
 - 600 people with different backgrounds were asked to handwrite 3 paragraphs each to create the final database
 - Investigating various neural network models for handwritten text recognition
- Fall 2015 **Data Mining**, *Department of Computer Science, University of Tehran, Tehran, Iran.*
- Income prediction with classification algorithms: Decision Tree, Random Forest, Boosting, and SVM
 - Income prediction with clustering algorithms including K-Means, Fuzzy C-Means, and DBSCAN
 - Developed in Python
- Fall 2015 **Biological Computation**, *Department of Computer Science, University of Tehran, Tehran, Iran.*
- Exploiting Genetic Algorithm (GA), Ant Colony Optimization Algorithm (ACO), and Self Organizing Map Algorithm (SOM) to solve the Traveling Salesman Problem (TSP)
 - Solving Job Scheduling Problem using Evolution Strategy
 - English character recognition using Perceptron, Multilayer Perceptron (MLP), Adaline, and Hebbian Neural Networks
 - Developed in MATLAB
- Spring 2015 **Artificial Intelligence**, *Department of Computer Science, University of Tehran, Tehran, Iran.*
- The Lazy Agent Problem
 - Finding the optimal path for the Lazy Agent, a robot having finite fuel, required to perform tasks with different priorities to minimize fuel consumption and maximize profit. Heuristic and Metaheuristic algorithms including A*, IDA*, Tabu Search, and Learning Automata were used
 - Developed in Java
 - *The Traveling Salesman Problem (TSP)*
 - Solving the problem using Simulated Annealing algorithm
 - Developed in MATLAB
- Spring 2015 **Compiler Design and Implementation**, *Department of Computer Science, University of Tehran, Tehran, Iran.*
- Implementation of a Persian Grammar Checker to check syntactic and lexical errors
 - Designed in Java

Education

- 2017–2019 **M.Sc. in Computer Science**, *Simon Fraser University, Burnaby, British Columbia, Canada.*
(Expected) Supervisor: *Prof. Anoop Sarkar, NLP Lab*
- 2012–2017 **B.Sc. in Computer Science**, *University of Tehran, Tehran, Iran.*
Advisor: *Prof. Bagher BabaAli*

Honors and Awards

- Fall 2017 Graduate Fellowship at Simon Fraser University, Burnaby, Canada
- Summer 2012 Ranked 825 among 103,256 (top 0.7%) in Iranian University Entrance Exam (Konkour) in math and engineering sciences
- 2005–2012 Studied in NODET (National Organization for Development of Exceptional Talents) middle school and high school in Ghaemshahr, Mazandaran, Iran

Research Interests

- Natural Language Processing
- Deep Learning
- Machine Learning