Kimia Hashemi | Curriculum Vitae

Amirkabir University of Technology–Department of Mathematics and Computer Science

kimia.hashemi@aut.ac.ir • kimiahashemi • itskimia

EDUCATION

- **Bachelor of Science** 2016–2021 (Expected)
  Amirkabir University of Technology *Tehran-Iran*
  - Computer Science
    - GPA (Last 5 semesters): 3.92/4 (19.1/20)
    - CGPA: 3.61/4 (17.68/20)

- **Bachelor of Science** 2017–2018
  Simon Fraser University (Fraser International College) *Burnaby-Canada*
  - Engineering Science
    - GPA: 3.7/4 via 30 credits

- **High School Diploma** 2016
  Aboureyhan High School *Tehran-Iran*
  - Mathematics and Physics Discipline
    - GPA : 19.77/20

HONORS

- Winner of the International Summit Transfer Entrance Scholarship from Simon Fraser University, Burnaby, Canada.

- Winner of the Honor Roll Award from Fraser International College, Burnaby, Canada.

- Selected as an Exceptional Talent from Amirkabir University of Technology Organization of Exceptional Talents, Tehran, Iran.

- Ranked Top 10% in Graduating Class of Mathematics and Computer Science Faculty, among more than 70 students, Amirkabir University of Technology, Tehran, Iran.

- Ranked Top 2% in University Entrance Exam, among more than 162,000 Participants [Summer 2016].
  - The competition is intense since it is the only means to gain admission to universities.

PROJECTS

- **Data Science Lab**
  - Sentiment Analysis and Topic Modeling on twitter regarding COVID-19 Pandemic
    - Gathered, performed Exploratory data analysis (EDA), and extracted tweets Spatio-Temporally
    - Performed Sentiment Analysis using the Empath lexical library
    - Performed Topic Modeling by Latent Dirichlet Allocation (LDA)
    - Visualized in Python

  - Deep Neural Prediction for Confirmed, Recovered, and Dead Cases of the COVID-19 Pandemic (Worldwide and by some countries)
    - Used 7 different Hybrid, Deep Neural Network models

- Predicted up to the next 14 days of confirmed,recovered, and dead cases
- Evaluated using MSE and RMSE measurements
- Visualized in Python
- Proposed to Iran National Science Foundation (INSF)

- **Data Mining Course**
  - Applied supervised learning on the hotel booking dataset to predict the chances of cancellation
  - Applied supervised learning to classify and predict heart diseases using Decision Tree
  - Implemented a Naïve Bayes classifier for classifying book reviews
  - Fully implemented and used the K-means clustering algorithm
  - Researched and gave oral presentation on AutoEncoders (Ranked 1st presentation in class by the students)

- **Numerical Analysis and Numerical Linear Algebra Course**
  - Implemented Least squared method and SVD decomposition
  - Implemented QR factorization with Givens function in solving a system of linear equations

- **Operating Systems Course**
  - Designed a C program to serve as a shell interface that accepts user commands
  - Implemented the Third Readers–Writers problem to manage synchronization
  - Implemented A Multi-threaded Sudoku Solution Validator

- **Artificial Intelligence Course**
  - Solved the Misplaced Tiles problem with two heuristics
  - Implemented the Riversi game
  - Implemented the Tic-Toc-Toe game

WORK EXPERIENCE

- **Hasin Technology Co.** August 2020-Present
  - Optical Character Recognition (OCR) on Persian Credit Cards

LANGUAGE SKILLS

- Persian Native
- English Proficient
  - IELTS Score : **7.5**
- German Beginner

PUBLICATIONS

- Kimia Hashemi, Mohammad Akbari, Sepehr Asgarian, *Sentiment Analysis and Topic Modeling on Twitter: an approach of opinion mining to the COVID-19 crisis* (in prepration)

- Sepehr Asgarian, Saeedeh Momtazi, Kimia Hashemi, *Deep Neural Prediction for Confirmed, Recovered, and Dead Cases of the COVID-19* (submitted)

COURSES

- Engineering Science and Society [Spring 2018]
  - ENSC 100W
- Process, Form, and Convention in Professional Genres [Spring 2018]
  - ENSC 105W

- Data Mining *Passed
- Artificial Intelligence *Passed
- Numerical Analysis *Passed
- Numerical Linear Algebra *Passed
- Probability I 20/20
- Probability II 20/20
- Foundations of Numerical Analysis 19.6/20
- Computational Geometry and Design 19/20
- Linear Optimization 19.2/20
- Introduction to the Theory of Computation 18.25/20
- Design and Analysis of Algorithms 19.5/20
- Foundations of Combinatorics 18.5/20
- Computer Architecture and Design 20/20
- Computer Networks 19/20
- Engineering Ethics 20/20

* COVID-19 Semester (Grades were Binary)

Online Courses

- Machine Learning
  · Instructor: Prof.Andrew Ng (Stanford University)
- The Complete Python 3 Course: Beginner to Advanced!
- Applied Text Mining in Python
  · University of Michigan
- Fundamentals of Reinforcement Learning
  · Alberta Machine Intelligence Institute

COMPUTER SKILLS

Programming/Scripting

- Python
  - NumPy
  - NLTK
  - sklearn
  - Pandas
  - Keras
  - OpenCV
- C/C++
- LaTeX

IDEs/Tools/Operting Systems

- PyCharm
- Jupyter
- Weka
- EAGLE
- Microsoft Visual Studio
- Microsoft Office
- Arduino IDE
- Matlab/Octave
- Microsoft
- Linux

TEACHING EXPERIENCES

- Teaching Assistant
  - Computer Networks — Winter 2020
    · Instructor: Prof. M.Hassan Shirali Shahreza
  - Computer Architecture — Fall 2020
    · Instructor: Prof. M.Hassan Shirali Shahreza
  - Principles of Operating Systems — Winter 2020
    · Instructor: Dr. H.Noorikhah
  - Design and Analysis of Algorithms — Winter 2020 - Fall 2020
    · Instructor: Dr. M.Asgaripour
  - Foundations of Numerical Analysis — Fall 2020
    · Instructor: Prof. F.Shakeri

- Peer Educator — Spring 2018
  - One-on-one weekly academic support and mentorship
  - Calculus I-II, Physics I-II, and C++ – Object Oriented Programming
  - Received the position due to educational excellence
    · Volunteer Opportunities (Fraser International College)

References and Further information are available upon request