

Erfan Alimohammadi

Faculty of Computer Engineering, Shahid Beheshti University, Daneshjou Boulevard, Velenjak, Tehran, Iran

☎ (+98) 919-30-39-381 | ✉ erfan.aa@gmail.com | 🏠 palindrome.ir | 📺 [erfaniaa](https://www.youtube.com/channel/UCv33333333333333333333) | 📄 [erfan-alimohammadi](https://www.researchgate.net/profile/Erfan-Alimohammadi) | 🌐 [erfan-alimohammadi](https://www.linkedin.com/in/erfan-alimohammadi) | 🐦 [erfanafre](https://twitter.com/erfanafre)

Research Interests

- Computer Vision
- Deep Learning
- Algorithm Design
- Computational Geometry

Courses

- [Machine Learning by Stanford University](#)
- [CS231n: Convolutional Neural Networks for Visual Recognition](#)

Education

KTH Royal Institute of Technology

Stockholm, Sweden

RESEARCH INTERN

2020

- Under supervision of [Prof. Martin Monperrus](#)

Shahid Beheshti University

Tehran, Iran

B.SC. IN COMPUTER ENGINEERING

2015 - 2020

- Related courses: Introduction to Programming (20/20), Advanced Programming (20/20), Discrete Mathematics (19.75/20), Data Structures (20/20), Design and Analysis of Algorithms (19/20), Bachelor's Thesis Project (20/20)

Allameh Helli High School

Tehran, Iran

DIPLOMA IN MATHEMATICS AND PHYSICS DISCIPLINE

2011 - 2015

- Affiliated with the [National Organization for the Development of Exceptional Talents \(NODET\)](#)

Professional Experience

Balad Maps

Tehran, Iran

DATA SCIENTIST

2020

- Balad is the most popular maps and navigation application in Iran, with a user-base of more than 4 million people.
- I was working on determining the possible locations of speed bumps and traffic lights of Tehran, by knowing users' GPS locations.
- I've done some computer visional tasks by using Variational Autoencoders in PyTorch, graphs, geometric data structures, etc.
- I was a software engineer interviewer, to help Balad in hiring new people.

Cafe Bazaar

Tehran, Iran

SOFTWARE ENGINEER

2016 - 2018

- Cafe Bazaar is the most popular and successful Android application store in Iran, with a user-base of more than 40 million people.
- I was a member of App Discovery team and Inline Apps team.
- I was a software engineer interviewer, to help Cafe Bazaar in hiring new people.
- I developed an admin panel for the executive team of Cafe Bazaar, using Python Django, HTML, CSS and Javascript.
- I was developing a platform for Android developers to create some Android apps which there is no installation needed for them.

Researches

Thatcher Illusion and Its Effects on the Face Recognition Problem

2020

- As a member of Shahid Beheshti University Computer Vision Group, I'm doing some researches on the face recognition problem.
- This project has been awarded as the best bachelor's thesis in the university.
- The paper is being prepared to be submitted on [Perception Journal](#), under supervision of [Prof. Ebrahimi Moghadam](#).
- A small part of its source code is available on [GitHub](#).

Satellite Images Super Resolution

2020

- It was done for Balad Maps to create larger satellite images for Iran maps.
- I read different papers and implemented some different methods, and I compared them with a valid metric.

Map Merging

2019

- This research was done under supervision of [Dr. Amin Gheibi](#) as a computational geometric problem.
- Our purpose was to merge two maps of a city by modeling them to graphs and polygons (using NumPy, Matplotlib, and NetworkX).
- I presented this research as a [guest speaker at the 21th ACM-ICPC Asia Tehran Regional Contest](#).

Teaching and Coaching Experience

TEACHING ASSISTANTSHIP

Computational Intelligence, Dr. Malek,	Fall '20
Design and Analysis of Algorithms, Dr. Ghavamizadeh, Held some TA sessions. Determined and graded some computer assignments.	Spring '18, Fall '18, Spring '19
Data Structures, Dr. Abin, Held TA sessions. Determined and graded the course projects.	Fall '17, Spring '18, Fall '18, Spring '19
Statistics and Probabilities, Dr. Safaei,	Fall '18
Data Structures, Dr. Ebrahimi Moghaddam,	Fall '18
Advanced Programming, Dr. Vahidi-Asl, Held some TA sessions. Graded a computer assignment.	Spring '17
Discrete Mathematics, Dr. Safaei, Helped handling some TA sessions.	Spring '17
Discrete Mathematics, Dr. Abdoos, Helped handling some TA sessions.	Spring '17
Introduction to Programming, Dr. Abdoos, Held some TA sessions (with extra contents about Linux OS). Determined a computer assignment.	Fall '16

OTHER

Young Scholars Club, Teaching to the medalist students of National Olympiad in Informatics	Fall 2020
Shahid Beheshti University, Coaching a team which got a <u>bronze medal</u> at ACM-ICPC Asia Tehran Regional Contest	Fall 2019
University of Tehran ACM Chapter, Teaching algorithm design and data structures	Fall 2018
Allameh Helli High School, preparing students for Iranian National Olympiad in Informatics	Summer 2015

Honors and Awards

ACM-ICPC AND IOI RELATED

2017	Silver Medal, <u>ACM-ICPC Asia Tehran Regional Contest</u>	Tehran, Iran
2017	56th Rank, <u>ACM-ICPC World Finals</u> (from among 133 teams chosen from a field of 46,381 contestants)	South Dakota, USA
2016	1st Rank, <u>ACM-ICPC Asia Lahore Regional Contest</u>	Lahore, Pakistan

PROJECTS

2013	The Best Project Award, <u>Allame Helli High School Seminar</u> (for an AVR-programmed project)	Tehran, Iran
2011	The Best Project Award, <u>8th NODET Young Researchers Festival</u> (for "Persian Letters OCR" project)	Tehran, Iran

OTHER

2020	96th Rank, The Nationwide Entrance exam of Iranian universities (from among 9000 graduated students)	Tehran, Iran
2019	80th Rank, <u>Huawei Neural Network Challenge</u> (an onsite competition among 124 selected universities)	Porto, Portugal
2018	Completed All Levels, <u>Google Foobar</u> (a secret challenge by Google, to examine your Java or Python skills)	

Skills

Technical: Pascal, Delphi, C++, Python, Java, Git, Django, Docker, Ubuntu, Raspberry Pi, Adobe Photoshop
Languages: Persian (mothertongue), English (upper-intermediate)

Notable (Recent) Projects

Fake Job Posting Detection	2020
• Classifying job postings with deep learning (using PyTorch, Skorch, and scikit-learn basic NLP tools)	
Commit Type Detection	2020
• Classifying Git commits with deep learning (using PyTorch, and scikit-learn basic NLP tools)	
Map Coloring	2019
• Backtracking on graphs for coloring a map with four colors (using NumPy, Matplotlib and OpenCV)	

Other Activities

Problemsetting for International Algorithmic Contests

- CodeChef March Cook-Off 2019, HackerEarth March Circuits 2019, CodeChef March LunchTime 2019, Codeforces Round #261