

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 | 📺 [erfan.aa](https://www.youtube.com/channel/UCv3v3v3v3v3v3v3v3v3v3v3) | 📄 [erfan-alimohammadi](https://www.linkedin.com/in/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

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 \(NODET\)](http://www.nodet.ir)

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.

Research Experience

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](http://www.perceptionjournal.com), under supervision of [Prof. Ebrahimi Moghadam](http://www.ebrahimi-moghadam.com).
- A small part of its source code is available on [GitHub](https://github.com).

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](http://www.amin-gheibi.com) 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](http://www.acm-icpc.org).

Courses

- [Machine Learning by Stanford University](http://www.stanford.edu)
- [CS231n: Convolutional Neural Networks for Visual Recognition](http://www.coursera.org)

Honors and Awards

ACM-ICPC AND IOI RELATED

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

PROJECTS

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

OTHER

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

Teaching and Coaching Experience

TEACHING ASSISTANTSHIP

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

OTHER

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

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	<i>2020</i>
• Classifying job postings with deep learning (using PyTorch, Skorch, and scikit-learn basic NLP tools)	
Commit Type Detection	<i>2020</i>
• Classifying Git commits with deep learning (using PyTorch, and scikit-learn basic NLP tools)	
Map Coloring	<i>2019</i>
• 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