# **Curriculum Vitae – 2020**

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Web	aliosmanatik.com.tr , linkedin.com/in/aliosmanatik
Education	2014 – 2019, İstanbul Teknik University - Computer Engineering - İstanbul
	2008 – 2010, Sakarya University – Computer Programming - Sakarya
	1998 – 2005, Ege University - Astronomy and Space Sciences - İzmir
	1991 – 1998, Bilecik Anatolian High School - Bilecik
Work Experiences	Granitaş Granit San. Tic. A.Ş. – Database Programmer 07.2012 - 08.2014 (25m)
Foreign languages	English (Advanced) (2019-YDS3 Score 83,75)
Hobbies	Mountaineering, AiKiDo, Guitar, Drawing, Photography
Additional	Class-B driving license (2006), Class-A2 driving license (2013)
	Military service completed (2008)
Certificates	Network and Systems (Advanced, 400 hrs., "Özel Meridyen Eğitim Kursu" – 05.01.2012)
Prog. & Dev.	C, C++, PYTHON, ROS, MATLAB, SQL, HTML5, CSS3, Raspberry Pi
Areas of Interest	Machine Learning (ML), Computer & Robot Vision (CV), Artificial Intelligence (AI), Natural Language Processing (NLP),
Internship Project 1	A comprehensive research for a chatbot project with NLP (Natural Language Processing) in Turkish for use on mobile insurance applications.
	Ortus Software & Consultancy 07.2017 - 08.2017 (1m)
Internship Project 2	Augmenting the performance of an existing plate recognition system with CV (Computer Vision) techniques.
	Esit Electronic Ltd. Co. 07.2018 - 08.2018 (1m)

## Graduation Project

### Company Relations Extraction (Şirket İlişkileri Çıkarımı - Yapı Kredi Teknoloji)

The aim of the project was to find relations between commercial customers of the bank from daily newspapers web pages by using NLP (Natural Language Processing) and ML (Machine Learning) techniques. As a brief detail, CRF (Conditional Random Fields) modelling methods has been used to detect the company names and SVM (Support Vector Machines) models have been used to classify the type of relations.

## A brief of Educational Projects

#### Analysis of Algorithm

- Implementing the Insertion-sort and Merge-sort algorithms in C++.
- Implementing Quick-sort algorithm by considering the constraints for a given problem.
- Implementing Insertion and Lookup routines for a dictionary and a basic list, and taking measurements for performance comparison.
- Implementing certain basic Red–Black Tree operations and augmenting data structure with extra operations for order statistics.
- Implementing BFS and DFS algorithms in order to solve a given problem.
- Implementing a suitable Divide-and-Conquer approach for a given problem.
- Implementing a solution for a Min-Cut problem and running Ford-Fulkerson algorithm on a given graph.

#### Robotics

- Program a ROS node to control a Turtlebot to move, avoid obstacles, and explore which will be simulated in Gazebo.
- Writing a ROS Kinetic package to find current location of the robot according to the robot's odometry and go to waypoints in a route that the robot needs to travel.

#### Computer Vision

- Image statistics, histograms and histogram matching.
- Implementing spatial filters and edge detection using Kirsch Compass operator.
- Implementing a simplified version of the Canny edge detector and feature matching using SIFT.
- Implementing Harris corner detector algorithm and segmentation of tumor region from a magnetic resonance image.
- Background subtraction, implementing and adapting Otsu thresholding algorithm for three-class segmentation and image alignment by PCA.

#### Computer Project

- Implementing an encrypted biometric authentication mechanism.
- Transmission of compressed text files with Huffman algorithm.
- Design and implementation of "Teaching Algorithms & Programming Game" for kids.
- Research for components and implement a hardware-circuit design and main software for a simple SLR camera.

#### **Computer Communications**

- Capture and analyze the TCP traffic on a moderate traffic network with Wireshark.
- A simple message board application using UDP socket programming with Python.