

Personal Information

Full Name	Ali AKGOZ
Title	Mr
Gender	Male
Marital Status	Married
Date of Birth	1985-06-09
Place of Birth - City	Ankara
Place of Birth - Country	Turkey
Nationality	Turkey
Primary Number	Cellular Phone
Home Phone Number	
Cellular Number	+905372774587
Work Phone Number	+903122958700
Email Address	ali.akgoz@tenmak.gov.tr
Alternate Email Address	aliakgoz@gmail.com



Education

Start Date	2005-09
Graduation Date	2011-08
Anticipated Graduation Date	No
Education Level	Bachelor's Degree (University Degree)
Institution	Middle East Technical University
Main course of study	Civil Engineering
Specialization	Structural Engineering
Institution Country	Turkey
Institution City	Ankara

Start Date	2019-09
Graduation Date	
Anticipated Graduation Date	Yes
Education Level	Master's Degree (Advanced Degree)
Institution	Hacettepe University
Main course of study	Civil Engineering
Specialization	
Institution Country	Turkey
Institution City	Ankara

Experiences

Python

I started to Python with an online course about 7 years ago, and now I consider myself as an advanced level developer in Python. During this time, I had deep experience mostly in data processing, data engineering and data visualization. I created artificial intelligence models on object detection and signal processing. I have developed pre-processing and post-processing codes for these. In one of my projects, I converted a very advanced scientific code (which consists statistical methods like PCA and SVD) from R to Python, and by working on this code, I made it 3 times faster than it was originally. I can use numpy, scipy, pandas, matplotlib, plotly, hdf5 and other important libraries at an advanced level. I have experience with database systems such as SQL and PostgreSQL. For my neural network projects I mostly used Tensorflow, Keras and Pytorch.

Some examples of my works in Python:

- SIDS : a very complicated and scientific code which I converted from R to Python. Note: Since this code has a commercial value I censored some of the lines. [Link=>](#)
- Colab notebook for neural network trials: For my thesis work I tried lots of models and prepared data for them. This notebook shows only some of them. [Link=>](#)
- Colab notebook which generates fractal animations: I wrote this code for fun actually, it generates images from Mandelbrot fractals and creates interesting animations. [Link=>](#)
- Kiknet data preparation code: Japanese kiknet data which contains millions of earthquake accelerogram data, I wrote this code to convert and store this data into a numpy structured array. [Link=>](#)

C++

I started to C++ at my university and until now I am writing C++ occasionally. Recently, we are using micro-processors in our projects which needs to be programmed using C++.

JavaScript

My online cv (at: <https://aliakgoz.github.io/>) is a reference for my Javascript experience. I wrote every working and responsive part of this page with Javascript. I used Plotlyjs for data visualizations, leafletjs for map visualization and online3Dviewer for 3D models in this page.

Employment Record

Start Date	2019-05
End Date	
Current Job	Yes
Employer	Turkish Energy, Nuclear and Mineral Research Agency
Job Function	Research and Development Engineer
Type of Business	R&D
Work Location (City, Country)	Ankara, Turkey
Exact title	R&D Expert
Achievements	<ul style="list-style-type: none">* I am a member of the group that developed and produced a handheld radiation detector prototype that could work with new generation ceramic scintillators.* Developed a mobile app for this prototype which works on both Android and IOS platforms. It connects to device via Bluetooth, processes the data, shows visualizations of data and archives data on the cloud.* Developed a website to visualize and use the data on the cloud.* Designed and 3D printed of prototype case for detector.* Took part in the project of "Aerial Radiation Monitoring using UAV"* Designed and 3D printed of prototype case for aerial radiation monitoring device.* Developed a web app for aerial monitoring device which connects it via RF module and overlays incoming data on the map simultaneously. For post-processing data it uses a geospatial analysis method (Krigging) to interpolate point data on an area.
Description of duties	<ul style="list-style-type: none">* Research and development on handheld radiation detector and its derivatives,* Research and development on a prototype of a neutron detector* R&D on radionuclide identifier device.
Full Time/Part Time	Full Time - 100%
Supervisor's Name	Erhan Aksu
Supervisor's Title	Head of R&D Branch
Supervisor's Email Address	Erhan.Aksu@tenmak.gov.tr
Supervisor's Phone	

Start Date	2014-04
End Date	2019-05
Current Job	No
Employer	Turkish Atomic Energy Authority
Job Function	Other Engineering
Type of Business	Energy and Utilities
Work Location (City, Country)	Ankara, Turkey
Exact title	Expert

Achievements

- * I worked actively in the licensing processes of Akkuyu NPP. I am a member of Civil Engineering Project Group which is responsible from R&A of civil engineering related parts of Preliminary Safety Analysis Report (PSAR).
- * My thesis on "Soil-Structure Interaction Modelling and Analysis Methods of Nuclear Power Plant Structures" is officially accepted by Turkish Atomic Energy Authority. In the scope of thesis I prepared 3D FEM Model and Stick Model of a typical VVER type reactor building. I used SASSI software to run analyses. As a result of analyses comparison of floor response spectra of some critical points given in different conditions given in the thesis.
- * I took part in the group which prepared the "Regulation on Construction Inspection of Nuclear Power Plants". This regulation is in use since March 2017.
- * I was one of three persons who prepared the "Regulation on Management System in Nuclear Installations" which is in use since April 2017. This regulation is based on IAEA GSR Part 2 "Leadership and Management for Safety".
- * I was officially a Nuclear Safety Inspector according to "The Regulation of Nuclear Safety Inspections and Enforcement".
- * I was a member of the group which is responsible from revision of "The Regulation of Nuclear Safety Inspections and Enforcement".
- * I lead several nuclear safety inspections at Akkuyu NPP site as Inspection Team Leader.
- * I participated several nuclear safety inspections at Akkuyu NPP site as nuclear safety inspector.
- * I have been participated in several manufacturer approval inspections according to "Regulation Regarding Equipment Procurement Process and Approval of Manufacturers for Nuclear Facilities".

Description of duties

- * Review and Assessment of Licensing application documents according to Licensing Base Document List.
- * Participation to improve nuclear safety regulations.
- * Nuclear Safety Inspections at Akkuyu NPP Site
- * Participation to regulatory oversight on civil works at Akkuyu NPP Site
- * Participation to regulatory oversight on implementation of management system requirements of "Regulation on Management System in Nuclear Installations".
- * Participation to regulatory oversight on Nuclear Construction Inspection Organizations' (NCIO) activities on the Akkuyu NPP site according to "Regulation on Construction Inspection of Nuclear Power Plants".

Full Time/Part Time

Full Time - 100%

Supervisor's Name

Tahir AKBAŞ

Supervisor's Title

Head of Working Group

Supervisor's Email Address

Tahir.Akbas@taek.gov.tr

Supervisor's Phone

Start Date

2012-05

End Date

2014-03

Current Job

No

Employer

Koltek Consultancy Joint Stock Company

Job Function	Other Engineering
Type of Business	Construction
Work Location (City, Country)	Ankara, Turkey
Exact title	
Achievements	<p>Participated in several projects as structural design engineer. Designed industrial buildings in accordance with national and international codes and standards.</p> <p>Participated in structural design control of tens of projects. Some examples:</p> <ul style="list-style-type: none"> - Gaziantep Stadium (33.000 Capacity) - Eyyubiye State Hospital (17 Blocks) - Sirnak University Buildings (Library, Cultural&Congress Center ...) -Van Center Military Recruiting Main Station Buildings
Description of duties	<p>Structural design of industrial buildings in accordance with national and international codes and standards.</p> <p>Structural design check and control of civil and military buildings.</p>
Reason for leaving	Left to join Turkish Atomic Energy Authority
Full Time/Part Time	Full Time - 100%
Supervisor's Name	Azize ÖZDEMİR
Supervisor's Title	Project Manager
Supervisor's Email Address	azizeozdemir@gmail.com
Supervisor's Phone	
<hr/>	
Start Date	2011-11
End Date	2012-04
Current Job	No
Employer	Nesma-Eser-Onur Joint Venture, Saudi Arabia
Job Function	Other Engineering
Type of Business	Construction
Work Location (City, Country)	Jeddah, Saudi Arabia
Exact title	Civil Engineer
Achievements	Finished Jeddah Stormwater Collection Project
Description of duties	<p>Technical Office Works:</p> <ul style="list-style-type: none"> - Changing design to solve the problems encountered in site works, - Control and inspect works done at site, - BoQ and final account works
Reason for leaving	Project finished.
Full Time/Part Time	Full Time - 100%
Supervisor's Name	Levent ALTUG
Supervisor's Title	Asst. General Manager
Supervisor's Email Address	
Supervisor's Phone	

Extended Profile Information

Mother tongue

Turkish

Level of English

Fluent

List of significant publications I have written

1. Master Thesis: Estimation of Shear Wave Velocity of Local Soils from recorded Acceleration Values by using Neural Network Models (continues)
2. Expertise Thesis on "Soil-structure Interaction Modelling and Analysis Reviews at Nuclear Power Plant Structures"

Link:

<https://kurumsalarsiv.tenmak.gov.tr/handle/20.500.12878/1194>

Description: It is in Turkish due to the regulations. ACS SASSI used for modelling and analyses, two model created one 3-D Finite Element Model and one stick model,
3. INVESTIGATING THE EFFECTS OF THE BASE RIGIDITY OF NUCLEAR POWER PLANT STRUCTURES THROUGH SEISMIC SOIL STRUCTURE INTERACTION ANALYSES, 10 Oct 2019, 5. International Conference On Earthquake

Engineering And Seismology

Link: [http://www.5icees.com/wp-](http://www.5icees.com/wp-content/uploads/2019/10/Hall-F-Seismic-Performance-2-Chairman-Vesile-Hatun-Akansel-Mugla-Sitki-Kocman-Uni-1.zip)

[content/uploads/2019/10/Hall-F-Seismic-Performance-2-Chairman-Vesile-Hatun-Akansel-Mugla-Sitki-Kocman-Uni-1.zip](http://www.5icees.com/wp-content/uploads/2019/10/Hall-F-Seismic-Performance-2-Chairman-Vesile-Hatun-Akansel-Mugla-Sitki-Kocman-Uni-1.zip) (Paper: 8989.pdf)

4. Vs30 Prediction from Earthquake Accelerograms with a Neural Network Model

Link:

https://mybinder.org/v2/gh/aliakgoz/ai_vs30_prediction.git/master?urlpath=%2Fapps%2Ffinal_graphs_slider.ipynb

International Meetings, Workshops and Courses

International Atomic Energy Authority (IAEA) – “Regional Workshop on Ageing Management Programmes including Concrete, Buried Piping and Flow-Accelerated Corrosion”, 07-09 September 2014, Uppsala-Sweden

Wakasa wan Energy Research Center (WERC) - Course of Nuclear Plant Safety, 16 November - 11 December 2015, China

European Nuclear Safety Training & Tutoring Institute (ENSTTI) - Education on Oversight of Nuclear Safety and Management Systems, 18-22 April 2016

IAEA - “Technical Meeting on Challenges and Opportunities in the Construction Management of Advanced Nuclear Power Plants”, 28-31 August 2018, Shanghai, China

IAEA - "Workshop on Concepts and Designs for the Disposal of Small Volumes Radioactive Waste, Lisbon, Portugal", 14-18 October 2019, Lisbon Portugal

IAEA - “Training Workshop on the Generic Roadmap for a Deep Geological Disposal Programme”, 25-29 Kasim 2019, Wien, Austria