PERSONAL INFORMATION

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EDUCATION

Jul 2018 | Bachelor of Science in Electrical and Electronics Engineering
Azad University (Central Tehran Branch), Tehran, Iran

Jan 2008 | Associate degree in Electrical Technician Electronics
Azad University (East Tehran Branch), Iran

PROFESSIONAL DEVELOPMENT

Sep 2024 │Sensors and Sensor Circuit Design | by University of Colorado Boulder | an online, non-credit course
by Instructors: James Zweighaft, Jay Mendelson, Grade: **89.36%.**

Feb 2024 |Fundamentals of GIS | by University of California, Davis | an online, non-credit course
by Instructors: Nick Santos, Eric Howard**,** Grade: **94.02%.**

Jan 2024 │Understanding Research Methods | by University of London│ an online, non-credit course
by Instructors: Dr J. Simon Rofe, Dr Yenn Lee, Grade: **100%.**

Aug 2022 │The Machine Learning Specialization | by Stanford University & DeepLearning.AI | Three online, non-credit courses
by Lecturer: Dr Andrew Ng, Aarti Bagul & Geoff Ladwig.
Course 1: Supervised Machine Learning, Regression and Classification, Grade: **99.83%.**
Course 2: Advanced Learning Algorithms, Grade: **99.87%.**
Course 3: Unsupervised Learning, Recommenders, Reinforcement Learning, Grade: **100%.**

PROJECTS & SKILLS

Jan 2023–Present │ EXOSYS Startup | Technical leader | Istanbul - Turkey

Description: The EXOSYS detector, developed by the EXOSYS startup team, is a ***multi-sensor system*** that combines ***data fusion*** and ***AI-driven*** technology to robustly identify and interpret critical information. Additionally, it features a ***creative and aesthetically design***, blending ***functionality with innovation.***
Outcome: EXOSYS Startup was accepted to participate in two entrepreneurship sessions at BTM, the incubator of Istanbul Ticaret University and the Istanbul Chamber of Commerce, in 2023–2024.
Used Skills:

o   Developed 'EXSIM LAB,' a ***cross-platform*** software for ***2D/3D visualization*** and data analysis, utilizing ***Delphi, C, Java, MySQL***, and ***SQLite*** with ***RAD Studio, STM32CubeIDE***, and ***Eclipse IDE.***
o   Designed a modular ***multi-channel*** detector using ***STM32 microcontrollers***, featuring ***instrumentation amplifiers***, ***12–31bit ADCs***, and ***channel switching***, utilizing ***Altium PCB Designer***, ***Proteus***, and ***Falstad for simulation***.
o   Engaged in ***manufacturing and production*** processes using ***specialized materials*** to enhance sensor functionality, reduce weight, and ensure durability in harsh environments.
o   Developed the 'Decuple Test,' a hardware-independent method for evaluating the spatial resolution of ***geophysical*** devices, using ***machine learning***, and ***image processing*** techniques.
o   Led ***international operations*** by ***prioritizing tasks***, ***managing global supply chains*** across Germany, China, and Turkey, and ***outsourcing*** production. Authored ***technical reports*** to ***resolve challenges***.

Oct 2022-Mar 2023│ PUYA-Wearable hand robot | Electronics & Firmware Advisor│ Istanbul - Turkey

Description: PUYA helps people to sense the virtual environment more like the real-world experience. PUYA synchronizes finger gestures, hand movements, haptic and force feedback between the hands of the human and the avatar.

Outcome: This project developed by the Biuniq startup, was supported by multiple academic networks in Turkey and nominated as one of the Turkish startups to participate in CES 2023 (USA).

Used Skills:

o Redesigned **architecture** of core **firmware** in C for STM32 microcontrollers to **control motors** and **monitor motion sensors** and **pressure sensors**. Integrated **IMU sensors** for hand **spatial tracking** in **VR applications** and implemented a **control loop** to enhance the **wearable robot's** stability and performance.

o Collaborated with multicultural teams, including **VR** designers, software developers, and mechanical engineers, across the USA, Turkey, Syria, and Iran. Demonstrated effective **teamwork** and **cross-cultural communication** to successfully **manage tight timelines** and deliver results.

Dec 2013-Sep 2018 │ Subsurface eye | Innovator & team leader | Tehran - Iran

Description: Led the development of the 'Subsurface Eye,' a project aimed at combining the strengths of various detection methods, including magnetometers, GPR, and metal detectors, while addressing their limitations to create a more effective and reliable solution.

Outcome: This project resulted in the establishment of two new companies in different countries and was repeatedly recognized as an innovative initiative by industrial and academic authorities, as well as the Iranian Parliament.

Used Skills:

o Designed and developed a **Fluxgate magnetometer**, incorporating an **AVR microcontroller** and creating over *30 firmware solutions* for **geophysical scanning**.

o **Innovated** the FSP **algorithm**, achieving higher **spatial resolution** in **geomagnetic** applications.

o Applied **out-of-the-box thinking** to develop **innovative solutions** that **create customer value** and establish new markets, aligning with the principles of **Blue Ocean Strategy.**

JOB EXPERIENCE

Jul 2018-Present | EXSIM ELEKTRIK YAZILIM | Founder & CTO |Istanbul-Turkey

About Company: Innovative design and development of electronic and mechanical hardware, software, and wearable devices for geophysics, focused on data detection, visualization, and AI-driven analysis.

Jul 2018-Present │ C.Z.S Company | Technical Advisor |Tehran-Iran

About Company: Innovatively designed and developed embedded systems, geomagnetic devices, metal detectors, and subsurface data solutions, including hardware, software, and firmware.

Jul 2016-Dec 2021 │MD-ECS | Exclusive Partner in Iran | Waalre - Netherlands

About Company: Expert in noise, vibration, EMI-specialized consulting services, and implementation.

Jul 2016 – Dec 2020 │ Stefan Mayer Instruments | Distributor in Iran |Dinslaken – Germany

About Company: Designing and manufacturing low-noise magnetometers, magnetic field canceling systems, and magnetic permeability meters.

Aug 2015- Jul 2018 │ C.Z.S Company | Founder & CEO |Tehran-Iran

About Company: Innovatively designed and developed embedded systems, geomagnetic devices, metal detectors, and subsurface data solutions, including hardware, software, and firmware.

Apr 2008 – May 2012 | Parstron Group | Founder & CEO | Tehran-Iran

About Company: Print and packing, Design CMS (content management system), web design and advertising systems.

Dec2003 –May 2004 | Diba Teb | Web developer and E-Shop designer | Tehran-Iran
About Company: medical company focused on the treatment and prevention of diabetes.

HONORS & AWARDS

Mar 2020 | Achieved the title of 'Inv.' | by IFIA (International Federation of Inventors' Associations) | Tehran-Iran
Type: certificate and membership.
Signed by: Prof. Dr. Michal Szota, Dr. Insil Lee, John J, Calvert.
Verification Number: IR2020MAR067ACXG, Issued in **Geneva - Switzerland .**

Dec 2016 | Accepted to present at the Azad University Selected Inventions in the 17th Exhibition for Research and Technology Achievements | by AZAD University | Tehran-Iran
Title: Inventor & Leader of the 'Subsurface Eye' team 3rd Generation.

Feb 2016 | Selected and top national inventor team at the exhibition of achievements and inventions of the Young Researchers Club and the IAU University Elite in the Iran | by Iran's Parliament | Tehran-Iran
Title: Primary inventor of the "Subsurface Eye" team.

Jan 2015 | Accepted to present at the Azad EXPO (Azad University Selected Inventions) | by AZAD University | Tehran-Iran
Title: Inventor & Leader of the 'Subsurface Eye' team.

Dec 2014 | Nominated as Top 10's selected technologies in the Iran National Technomart & The 15th Exhibition for Research and Technology Achievements | by Iran National Technomart & Ministry of Science, Research and Technology | Tehran-Iran
Title: Inventor & Leader of the 'Subsurface Eye' team.

May 2014 | Accepted to present at the 32nd anniversary of Azad University | by AZAD University | Tehran-Iran
Title: Inventor & Leader of the 'Subsurface Eye' team.

Dec 2013 | Showcasing as a member of IAU in the 14th National exhibition of Research and Technology of the Ministry of Science which led to the election of the IAU as one of the distinguished booths. | by the Ministry of Science | Tehran-Iran
Title: Student Team`s member.

PATENT APPLICATION

Aug 2017 | Metal pipeline position diagnosis detector and buried channels with selective 3-mode gain |Tehran-Iran

International classification: E21B47/00.
Validity date: August 23 ,2017 to August 22 ,2037.
No. of Trademark registration: *****
Link: ****
If the link is restricted in your country, please feel free to request the original documents directly.

GRANT FUNDING AND SUPPORTS

Jan 2023 - Feb 2024 │ Istanbul Ticaret Uni. & Istanbul Chamber of Commerce Incubator (BTM) | Istanbul-Turkey

Type of support: Free office space, Free entrepreneurship courses and networking resources, participate in Turkey startup ecosystem events.

Nov 2015 - Oct 2022│ Azad University (IAU) Incubator | Tehran, Rudehen - Iran

Type of support: Free office space, attending and participating in multiple exhibitions free of charge or with costs refunded, and provided with shared networking resources.

CONFERENCES

Dec 2024 │ 21st Iranian Geophysical Conference (IGC 2024) | by NIGS & Geological Survey and Mineral Exploration of Iran | Tehran - Iran

Mar 2023 │1st Conference on Applied Geophysics in Mines | by NIGS & The Institute of Geophysics | Tehran- Iran

Feb 2018 │36th National and the 3rd International Geoscience congress. | by Geological Survey and Mineral Exploration of Iran | Tehran- Iran

MEMBERSHIP OF PROFESSIONAL ORGANIZATIONS

Oct 2024-Present │IEEE (Institute of Electrical and Electronics Engineers) | Member
Feb 2024-Present │ SEG (Society of Exploration Geophysics) | Member
Oct 2022-Present │ IIA (Iran Inventors Association) | Member
Apr 2022-Present │ NIGS (National Iranian Geophysical Society) | Member
Mar 2020-Present │IFIA (International Federation of Inventors' Associations) | Inv. Member

LANGUAGE SKILLS

English	Higher intermediate
Turkish	Intermediate
Persian	Native

For a full resume with additional details and references, please contact me at mrghpro@gmail.com.