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Personal Information

- Date and Place of Birth: 19.06.2000, Urmia-Iran.
- Gender: Male.
- Marital Status: Single.
- Interests and Activities: Languages, Basketball, Billiards, Biking, Reading, Guitar Playing.

Education

- Bachelor of Science: Electrical Engineering (Control Systems), 2018 – Present, **University of Tabriz**, Tabriz, Iran.
  - GPA: 17.08 out of 20, (**3.42**/4).
- High School Diploma in Math & Physics, 2014 – 2018, **National Organization for Development of Exceptional Talents** (NODET) **Shahid-Beheshti High-School**, Urmia, Iran.
  - GPA: 18.98 out of 20, (**3.79**/4).

Languages

- Persian: Native.
- Azeri: Native.
- English: Proficient.
- Turkish: Proficient.

Research Interests

- Aerial Robotics
- Robot Intelligence, Machine Learning, Deep Learning
- Human-Robot Interfaces
- Self-Driving Cars
- Data-Driven Control
- Swarm Intelligence
- Brain Computer Interface
- Neuro Psychology

Summary of Skills

- Experienced in Making Quadcopters.
- Familiar with Machine Learning and Deep Learning Algorithms (MLP, LSTM, CNN, SVM, KNN, Statistical Algorithms, LDA, Decision Trees, ...).
- Familiar with Advanced Model Training Principles (Data Preparation, Feature Engineering, Dimensionality Reduction, Model Training, Evaluating, Data Visualization…)
- Familiar with Optimization Algorithms (GA, BBO, PSO, ACO, SGD).
- Classification, Clustering and Feature Engineering of Single and Multi-Channel EEG Signals.
- Experienced in Working with Arduino and Raspberry Pi Boards and Several Hardware Modules.
- Programming Languages: C/C++, MATLAB, Python, Java (Processing 3), Bash (Beginner-Level).
- Operating Systems: Completely Familiar with MICROSOFT Windows, GNU/Linux and WSL.
- Familiar With 2D and 3D Design in AutoCAD.
- Solid Mathematic Background in Statistics, Linear Algebra and Calculus for Machine Learning.
- PCB Designing with Ki-CAD.

Work Experience

- Online C/C++ Test Preparation Tutoring for Freshmen 2019-Present.
- MATLAB, C/C++ and Python Projects Freelancing 2019-Present.

Honors

- Tabriz University IEEE, Award Winner in Programming (1 Year free IEEE Membership + a Special Pen)
- Ranked 2051(out of over 200,000) in the Math & Physics Branch of the Nationwide University Entry Exam (NUEE), 2018.
- A Solid Background in High-school Algebra, Calculus and Physics.
- First Rank in High-school Library as the Top Reader (2016).

Research and Developments

- Making an Arduino and Raspberry pi Based Quadcopter in 4 Different Hardware Configurations. (C++) (2019-present)
- Designing an Arduino-Based Transmitter and Receiver PCB for Quadcopters. (C++) (KiCad) (2020)
- Creating a Low-cost Remote-Control Interface. (Java, Processing 3 + Arduino) (2020)
- Creating a UDP Interface for Ryze-Tello Drone. (Java, Processing 3) (2020)
- Creating a Raspberry Pi Library for PCA9685 PWM Driver and BNO055 IMU Module. (C++) (2020)
- Classification of One-channel EEG Signals for Seizure/Alzheimer Detection Using SVM, LDA, KNN, MLP Algorithms + Cross-Validation Method with Both Time, Frequency Domain and Wavelet Feature Extraction and Selection. (MATLAB) (2019)
- Using Genetic Algorithm (GA) and Bio-geography Based Optimization (BBO) for Feature Selection of EEG Signals. (MATLAB) (2019)
- Multi-Channel EEG Signal Motor Imaginary Classification with LDA, SVM, KNN Classifiers and K-Fold Cross-Validation, with Parallel Computation Boosting. (MATLAB) (2020)
- Feature Engineering for a Stock Market Trend Prediction Project, with Wavelet Denoising and Feature Mapping and Selecting from the Technical Indicators.
- Implementation of Different Spatial Filters (CAR, High-Laplacian and Low-Laplacian) with Improved Common Spatial Pattern Algorithms, on Multi-Channel EEG Signals to Enhance Classification Accuracy to 96%. (MATLAB) (2020)
- Creating a Plot Interface for Fast Manual Selection of ECG signal R-peaks. (MATLAB) (2021)
- Classification of Multi-Channel Parkinson's Disease EMG Signal with a 97.2% Accuracy Using Neuro-Evolution and SVM. (Feature Extraction, Feature Selection, Model Training, Model Evaluation) (MATLAB) (2021)
- Classification of MNIST, Fashion-MNIST and CIFAR10 Using CNN Using TensorFlow. (Python) (2020)
- Using Particle Swarm Optimization (PSO), GA and BBO for Optimal Channel Selection of EEG Signals. (MATLAB) (2019)
- Animating Double Inverted Pendulum and Lorenz Attractor Using Numeric Methods of Solving Differential Equations in MATLAB regarding to Henri Poincare's date of decease. (MATLAB) (2019)

- Creating 2D and 3D Sierpinski Triangle and Pyramid with Random Dots. (MATLAB) (2019)
- Making a RC-Airplane with Laser-Cut parts and RC-Electronics. (2021)
- Making a Line-Follower Robot. (Arduino) (2017)
- Making an Obstacle Avoiding Robot. (Arduino) (2017)

Publications

- "An Introduction to Quad Copters", Electrical Engineering Department Community Press, Tabriz University, 2019.
- "Swarms of Drones", Electrical Engineering Department Community Press, Tabriz University, 2020.

Conferences Attended

- Attending Internal Seminars Held By Tabriz University's Electrical Engineering Faculty;
  From Engineering Electromagnetics to Electromagnetics Engineering (Dr L. Sevgi),
  Virtual and Artificial Reality (Dr A. Aminzadeh Ghavifekr),
  Surgical Robots (Dr A. Aminzadeh Ghavifekr).

- Attending Online Seminars Held by Tabriz University's Electrical Engineering Faculty;
  Introduction to Optimization (Dr A. Mir Jalili).

- Attending Online Symposiums Held by the Institute of Cognitive and Brain Sciences (ICBS) of Shahid-Beheshti University and Loop Academy;
  Deep-Learning and Neural-Networks. (April, 2020)

- Attending Online Conference Held by Tabriz University's Electrical Engineering Faculty;
  International Conference on Control, Instrumentation and Automation. (ICCIA2020) (February, 2021)