Elnaz Karimpour
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Career Objective:
An individual with master degree in electrical engineering (Mechatronics and Automation Control) I am currently working in an agile environment and as a firmware developer for a smart electricity energy meters company. I am well versed in C programming and familiar with Python, C++ My job includes Implementing serial communication control (Modbus,..) Interfacing and developing driver for sensors and external memories (I2C, SPI, TWI,..) Bootloader GPRS, and GSM modem driver development

https://elikrm.github.io/

Summary of Skills
- In-depth knowledge of embedded control C programming, Microcontrollers such as MSP430, ATxmega, AVR, PIC and Arduino, system level electronic design, and system interface design,

- Well-versed in Python, Git/ Bitbucket/ SVN

- Familiar with C++ and OOP concept, HTML, CSS, Java Script, Django, REST API Design

- Sound knowledge of Metaheuristic algorithm such as ANN, GA, and PSO

- Skilled in electronic circuit schematic and PCB design in Altium Designer for embedded systems
- Protel (Altium Designer), Orcad, Proteus, and AutoCAD,

Work Experiences

Company Name: EDMI Limited
Title: Firmware Design Engineer
Dates Employed Nov 2017 – Present
Employment Duration: 2 yrs 11 mos
Location: Brisbane, Australia
Brief Description of Activities:
● Firmware development & enhancements of EDMI smart energy metering platform
● Development of EDMI communication stack, interface to different 4G / CAT-M modems
● Automation test scripts for new features using Python & Gauge
● Support of level 3 technical issues from clients

Research assistant on a casual basis
Mining3 101/2436 Moggill Rd, Brisbane QLD 4069
Nov 2016- Jan 2017
Brief Description of Activities:
To develop a Software with matlab scrpting and Matlab GUI to determine fuel consumption of trucks based on a number of relevant input parameters and by implementing an optimization algorithm find the optimized input parameters that give the minimum fuel consumption for the truck.

Mentor at CodingKids New Farm, Brisbane City QLD 4005
Nov 2016- Nov 2017
Brief Description of Activities:
Working as a mentor to teach students how to code with scratch and python, robotic classes with EV3, electronic classes with Arduino, attending workshops for teaching librarians to make them familiar with Scratch, Python, Raspberry Pi, Kano Computer, Sphero robotic ball, Dash and Dot robot, LittleBits electronic modules, and App Inventor (a visual, blocks language for building Android Apps).

Sadra Robotic, educational institution and electrical sales (Isfahan, Iran)
Lead Mentor
Dec 2015 – Jun 2016
Brief Description of Activities:
- Developed and implemented new strategies directed at teaching the C language programming to students
- Conduct special classes for students aged between 5 to 17 with appropriate strategies named CoSpace Rescue which is virtual autonomous robots to teach basic C programming and robotics
- Teaching students with Visual aids for better understanding
- Stay updated with the changing syllabus.
- Designing the syllabus for the students and the school.

Electrical Test Engineer
Piroozan Sanat Sepahan Novin Company (Private Joint Stock- Iran)
From Oct 2009- March 2011
Brief Description of Activities:
It was a Technical- Engineering Company with the bussiness of Sale, Installment and Starting Diesel Engins and Generators Equipped with Automatic Control System Design and Installation of Fire Alarm System of Factories and Gas Stations
- Responsible for PCB board-level functional testing, troubleshooting, and testing process and instruction configuration,
- offer electrical system maintenance services to clients,
- testing products, and
- electrical circuit design.

Electrical Test Engineer
Arman Technic Sepahan Company (Iran)
From April 2011- Feb 2012
Brief Description of Activities:
- Design and test of switching power supply (charging of Automobile Batteries And Rectangular Batteries, and I phone Video System)
- Responsible for PCB board-level functional testing, troubleshooting, and testing process and instruction configuration,
- Designed a temperature controlled fan circuit (microcontroller based project)

Academic Experiences (Teaching)
March and April 2016 Cooperated with Isfahan University Scientific Assosiations Coordination Office as instructor in holding MATLAB Software training workshop held for 32 hours
Jan 2015 March 2016 Private tutoring in MATLAB Software (Simulation, Programming and GUI) and ANN

Education
Master of Engineering:
Master of Engineering. in Electrical Engineering (Major of Mechatronics and Automation Control)
Universiti Teknologi of Malaysia (UTM), Johor Bahru, Malaysia, 2012- 2014
CGPA: 3.91 out of 4
Thesis Title: Simulation and Optimization of Electrical Discharge Machining Process Using Particle Swarm Optimization (PSO) via MATLAB coding and simulation.

Bachelor of Engineering:
Electrical Engineering, Azad University, Isfahan, IRAN, 2004-2008
Bachelor Research Project: Speech processing of the sound of crying infants to categorize them in three groups: 1. Healthy 2. Dumb 3. Deaf

Volunteer Experience
- Volunteer at Robogals which is a student-run non profit that run EV3 workshops in schools.
- Volunteer judge at RoboCup Junior competition 2017
- Working at University of Queensland, Mechanical and mining school as a volunteer researcher.
- Assisting in conducting literature reviews for drafting: A chapter of Energy Efficiency in hauling and loading in the Minerals industry book.

Publications
1. **Title:** "Dynamic Modeling of Electrical Discharge Machining (EDM) System Using Matlab"

Authors: Elnaz Karimpour, Azli Yahya, Sophan Wahyudi, Trias Andromeda, and Muhammad Arif Abdul Rahim
Applied Mechanics and Materials Vol. 661 (2014) pp 176-182 © (2014) Trans Tech Publications, Switzerland doi:10.4028/www.scientific.net/AMM.661.176
2. **Title:** "SYSTEM IDENTIFICATION USING MICROCONTROLLER-BASED N-PRBS GENERATOR"

Authors: Elnaz Karimpoor and Mohammed F. Jaff
3rd international conference on science and engineering which was held in Istanbul- Turkey on 2nd June 2016
3. **Title:** "Design and fabrication of dual-axis solar tracking system using PLC technology for parabolic dish"

Authors: Hosein Dehghani Samani, Behnam Mostajeran Goortani, Elnaz Karimpour
3rd international conference on science and engineering which was held in Istanbul- Turkey on 2nd June 2016
4. **Title:** "Carbon Nanotubes-Based Gas Sensor."

Authors: Vahid Behtaji Siahkal, Elnaz Karimpour, Farshad Davoudifar, and Ali Hosseingholipourasl.
International Journal of Pharmaceutical Science Invention ISSN (Online): 2319 – 6718, ISSN (Print): 2319 – 670X www.ijpsi.org Volume 2 Issue 6‖ June2013 ‖ PP.115-120