Akif Turker
Embedded Software Engineer

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PROFESSIONAL SUMMARY

In the last 5 years, I have worked professionally in the electronics industry, gaining experience in projects as an **embedded software engineer** and **team leader**. I have experience in a wide range of technologies for embedded software structures including **C/C++**, **Pyhton**, **Bare-Metal** , **RTOS**, **Electronic Firmware, Embedded Software**, **Electronics Design** and **Product Prototyping**. Interested in **Wireless Technologies**, **Internet of Things**, and **Autonomous Systems**.

I am resourceful, analytical and detail-driven with capabilities in completing multiple projects with competing deadlines. Aggressive in identifying and resolving inefficient operational processes. Strong team leader and member; able to motivate others to achieve optimal production rates while maintaining safety methods and practices. Strong interpersonal skills; interface effectively with co-workers and clients.
Available for **contract** roles based in the UK.

TECHNICAL SKILLS

- MISRA C / C++ / C# / Python / VHDL / Bare metal, RTOS, FreeRTOS, Yocto Project
- Experience with various microcontrollers and related compilers and debuggers such as Keil uVision IDE, MPLAB X IDE, Eclipse, ARM Cortex-M, CMSIS, Microchip PIC, AVR , NXP I.MX, FPGA, Raspberry Pi
- Experience with software & hardware of interfaces: TCP-IP, CAN, USB, UART, SPI, I2C, ADC, DMA, Flash, GPIO, GSM, GPS, WiFi, BLE, Zigbee
- Experience in using Oscilloscopes, Signal Generators, Spectrum Analyzers and Bus Analyzers.
- Altium Designer & Autodesk Eagle (EMC and EMI Compliances)
- Git, Scrum/Agile, UML, Unit Test
- MATLAB & Simulink , NI LabVIEW
- SolidWorks, Catia, ANSYS, COSIMIR

WORK EXPERIENCE

Contract Embedded Software Developer *Jun. 2019 to Sep. 2019*
Ocean Signal Ltd, Kent, United Kingdom

- Developed and debug AIS (Automatic Identification System) Class A Transponder embedded firmware.
- Embedded C development for ARM STM32F4 and STM32F7, CML AIS baseband processor for marine VHF communications
- ESP32 WiFi, USB, SPI with DMA, bootloader
- Eclipse, MISC and HAL libraries, Segger J-Link and ST link debugging
- GIT, UML

Research & Development Director *Jan. 2017 to Mar. 2019*
Startech Elektronik Ltd, Istanbul, Turkey

- Responsible for the engineering and administrative management of the research and development department.
- Manage projects with developer engineers and stepped in as a developer engineer in critical situations.
- Carry out new product researches and innovative ideas developments with project colleagues.
- Responsible for the performance of the Agile project management with Scrum methodology in the department.
- Responsible for analysing reported feedbacks and solving hardware and software problems of more than 40.000 products which have been working in the field.

Research & Development Engineer *Oct. 2014 to Jan. 2017*
Des Elektronik Ltd, Istanbul, Turkey

- Developed electronic schematics and printed circuit boards on computer-aided design programs and carried out prototype manufacturing.
- Developed software of microprocessors in C/C++ languages and computer software in C# and Python languages.
- Designed product equipment and enclosures on computer-aided design programs and carried out prototype manufacturing using 3D printers.

Engineering Intern *Sept. 2013 to Oct. 2013*
Hema Endustri Inc , Tekirdağ, Turkey
- Worked on the NI LabVIEW software platform to test, measure and control industrial sensors and data.

Engineering Intern *Aug. 2012 to Sept. 2012*
Kocaeli University Machine Vision Laboratory, Kocaeli, Turkey
- Practical education on embedded firmware on an autonomous vehicle. Microchip dsPIC33F microprocessor.

EDUCATION

Bachelor of Science *Sept. 2010 to Mar. 2014*
Mechatronics Engineering, Kocaeli University, Kocaeli, Turkey

Associate of Science *Sept. 2007 to Jan. 2010*
Mechatronics, Gaziantep University, Gaziantep, Turkey

MAJOR PROJECTS

Smart Camera System for Vision Analysing *Dec. 2018 to Present*
- The product analyses vision in real-time using an industrial camera. Developing carrier board of SOM which includes an Intel Atom E800 processor with Altium Designer. The carrier board supports Wi-Fi, USB 3.0, HDMI and a Gigabit Ethernet which communicates with the PCIe interface of the processor.

Electronic Lock for ATM *Jan. 2016 to June 2017*
- The product protects an ATM's safe box and cabinet through internet control. Developed the electronic schematic and printed the circuit board of the product which was running with an NXP i.MX 6 processor on Embedded Linux. The software was developed in Python. Gained experience with TCP/IP, GSM and GPS modules in this project.

ATM Security Device *Dec. 2014 to July 2016*
- The product senses physical fraud attacks on ATMs using several sensors. Developed the electronic schematic and printed the circuit board of the product which was running with an STM32 Cortex-M3 ARM microprocessor. The device has passed the EMC and EMI tests and was registered in the CE standard. The software was developed using Keil uVision with Embedded C.

Wireless Input Output(I/Os) *Sept. 2015 to Apr. 2016*
- The product sends and receives digital, analogue, and 4-20mA sensor data with 868MHz and 2.4GHz RF signals. The device was running on an STM32 Cortex-M0 ARM microprocessor. The software was developed in the C++ language and the device supports the Modbus protocol on an RS-485 communication interface.

Infrared Data Transreceiver Module *June 2018 to Feb. 2017*
- PIC16F microcontroller, Toshiba IR sensor, infrared serial communication, embedded firmware

Analog Capacitive Sensor - Digital Capacitive Sensor *Jan. 2015 to Dec. 2017*
- TI FDC capacitive IC, RS485 and I2C communication, OpAmps, firmware, analog and digital sensor circuit design

Android & Bluetooth Controlled Self-Balancing Robot *Oct. 2013 to Dec. 2014*
- dsPIC33F microcontroller, MPLAB IDE, embedded C

Computer and Remote Controlled 3-Axis Robot Arm *Oct. 2009 to Feb. 2010*
- PIC16F microcontroller, USB , embedded firmware, GUI developed on C#

CERTIFICATE

Leonardo Da Vinci Project *Nov. 2007 to Dec.2007*
Eckert Schulen**,** Regenstauf, GERMANY
- PLC, Microprossesor(Atmel AVR), Circuit Analysis and German Language Modules.