

# Sikender Shahid

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## Summary

Recent graduate of an ABET-Accredited Engineering college.

- Looking for an Embedded Software Engineering position in design and development.
- Excellent understanding of design principles in large variant of Architecture and Levels of product development.
- Experience in performing unit and regression tests, and automation for software and engineering CAD designs.
- A Strong work ethic with abilities to thrive in a highly fast-paced environment
- Willingness to be hands on and detailed oriented in prototyping product development.
- Thorough understanding of instrumentation, data acquisition, and data processing algorithms.
- Attitude of taking independent initiative, while remaining dedicated to teamwork and promoting creative problem solving algorithms.

**Education:** University of Houston, Cullen College of Engineering

May 2016

Degree: Bachelors of Science in Biomedical Engineering

Emphasis: Neural & Rehabilitation Engineering; Computer Engineering

Minor: Computer Science; Mathematics

GPA: 3.2

## Technical Skills

Programming Languages: Embedded C, C/C++, Java, Python, Assembly (Freescale Motorola, x86, x64, MIPS, Atmel), shell

Methodologies: OOP, Embedded Systems, Test Driven Development, Machine learning, AI, Functional Programming

Automate Scripting: python, sh, bash

Platform: Linux, Android, Windows, JVM, RTOS

Communication: Bluetooth, I2C, SPI, SCI, low-level using UART, RS232, TCP/IP, Cloud

Software Engineering: UML, MVC, TDD, SOLID design practices, Agile development, SCRUM

Electronics: DSP, EM, Analog Circuit and Digital Circuit design, Circuit Analysis, OrCAD, Verilog, Altium, Circuit Maker

Mechanical: Dynamic modeling and controls design, PDE, AutoCAD, AutoCAD Inventor

Bio Design: Biological Systems Modeling, FDA regulatory, Intellectual property process, Market planning

## Job Experience

OcuRhythm, LLC – Startup Founder

January 2016 - Present

- Plan, Schedule, track and coordinate the assigned tasks with accountability.
- Develop innovative designs with extensive use of common design constructs and patterns utilizing best practices.
- Designed, simulated, tested, and 3D printed product designs with AutoCAD's and Altium's CAE tools.
- Wrote unit tested software for Bluetooth communication, PCB, android app, cloud database using best principles.
- Promoted and reviewed codes and design to check if meets standards and quality.

Software Design Course Projects

January 2016 – May 2016

- Developed 100% coverage reports for unit tested python code.
- Automated testing using paver package.
- Performed daily code reviews submission for projects and received feedback using svn version control.
- Developed object oriented designs abiding by OO principles and analyzed for notable design patterns.
- Initiated projects from coarse-grain designs to fine-grain maintainable and evolutionary designs.
- Projects included GUI design, dynamic programming, encryption, and real-time data with XM and JSON format.

Biomedical EEG finger movement prediction project

March 2016 – May 2016

- Researched through a magnitude of research papers for pre and post processing of EEG building a portfolio.
- Modeled and implemented signal processing of EEG from electrode data in both hardware and software.
- Utilized MATLAB for stationary ML simulation and Python sci-kit package for nonstationary embedded ML.

- Worked with 32-bit C28x DSP architecture on code composer studio.
- Implemented algorithms for wavelet transforms, feature extractions, selection LDA, and pattern recognition.

Digitization and pattern recognition of auscultation (electronic stethoscope) project September 2015 – December 2015

- Researched and developed diagram by dividing the working parts into modules.
- Designed and performed simulation for transducer and amplifier circuit using OrCAD for extracting ECG data.
- Designing 8 bit pipelined ADC and DAC using Operational Amplifiers for better understanding of data compression.
- Wrote and tested C firmware code using Freescale Motorola 32bit architecture MCU for pattern recognition.

Stanford Bio design Project

May 2015 - August 2015

*Sponsored by Wallace H. Coulter Foundation and Biomedical Engineering Society*

- Researched and documented customer insights to isolate problem and define need in laparoscopic surgery market.
- Performed research in market analysis and studies of the upstream marketing, with focus on all stakeholders (5P's).
- Gained experience in analyzing and filing for 510-K FDA regulation, and U.S. Patent.
- Designed and engineered (CAE) an autonomous cleaning trocar integrable with all laparoscopic surgical tool.

Undergraduate Student Instrumentation Project

August 2014 - May 2015

*Sponsored by NASA, Wallops Flight Facility (NASA-WFF)*

- Developed timestamp module and VLF receiver through TTL and HCMOS technology for Ionosphere/Aurora study.
- Used TTL, HCMOS ICs, and Atmel MCU to configure signals and controls to output standardized IRIG-B signal
- Performed mathematical computation for Loop antenna and VLF/EM receiver.
- Wrote tested and documented firmware code for an Atmel microcontroller (avr-c library) Atmega328P.
- Developed circuit design using OrCAD to obtain Gerber files for PCB manufacturing and documentation.

## Organization / Honors

American of Institute of Aeronautics and Astronautics (AIAA) – Vice President

August 2015 – May 2016

Biomedical Engineering Society (BMES) – National Member

UH - CougarCS

University of Houston Dean's List Honor

## Previous Work Experience

Northwest Community Health Center, Harris County Hospital District (HCHD)

March 2012 - August 2012

*Pharmacy Technician – PTCB certified*

- Familiarity of pharmacology, pharmaceutical processes, regulatory laws, and Texas Board of Pharmacy Acts.

International Bank of Commerce (IBC)

June 2010 - January 2012

*Personal Banker*

- Leadership - Management Responsibilities, Managing Co-employees, Meeting branch quota expectations
- Performing accounts sales including banking accounts and investments accounts
- Investment responsibilities entailed providing customer information on shares, dividends, interest rates on products