rashaadsidique

Telephone: 480 274-9757, E-mail rsidique@gmail.com
232 S. Rush Circle E., Chandler, AZ 85226

Objective To work in a position where I can combine my experience in project management, prototype development, computer programming, and biomedical engineering to help make life-changing technological advances

Skills

Circuit design and testing using Cadence, PSpice, and on the breadboard

Objective-C, Java, C++, C#, MATLAB, assembly, and LabVIEW

Prototype design (SolidWorks), construction, and testing

Education

Arizona State University
M.S. Biomedical Engineering (May 2010)
B.S. Biomedical Engineering (May 2007)

Relevant Coursework

Built and characterized a wireless polarographic oxygen sensor using a Schottkey diode, Pt and Ag/AgCl electrodes, an RF transmitter, RF filters, an antenna, and a demodulator/rectifier

Designed and built an optical biosensor for detection of copper in blood using optical filters, an LED, a photodiode, a fluorophore, and a copper-labile peptide

Created a path-finding algorithm in MATLAB to navigate through a map from a given start point to a given end point

Designed an algorithm for the compression of a series of velocity-encoded MR images

Developed a program that analyzed neural signals using auto-regressive models

Designed and simulated digital and analog circuits in Cadence and PSpice

Developed programs in C++, Java, C#, MATLAB, LabVIEW, and assembly language

Activities

ThinkDot, June 2009 – present
Help organize an annual event that professionally showcases presentations, performances, and original videos made by and for local youth

Media Mob, December 2009 – November 2010
Helped start Media Mob as a media production and services group

Acted as co-writer on scripts, actor, camera man, and editor

MAS Youth, June 2008 – August 2010
Selected to serve as a board member

Organized conferences, summer camps, and other events

Acted as financial officer

Experience

2011

TappForce
iOS Developer, October 2011 - present
Currently developing a social networking application that allows users interact by posing questions and answering questions posed by other users

Barrow Neurological Institute
Biomedical Engineer, June 2010 – present
Took on the role of project manager for an animal study to determine optimal vagus nerve stimulation parameters for the treatment of epilepsy

Lead efforts to build, test, and modify the setup for acquiring EEG data

Worked to modify and calibrate the hardware and software of the stimulator to produce the desired waveforms, frequencies, duty cycles, and patterns

Collected and organized all EEG and brain dynamics data

Determined the effectiveness of different forms of stimulation by analyzing non-linear brain dynamics in MATLAB

Developed programs in C# .NET to make data acquisition and stimulation execution more reliable

2010

Bioinstrumentation and Biosensors Lab
Engineering Research Assistant, January 2009 – May 2010
Contributed to the development of wireless RF and ultrasound neural stimulators and recorders by building prototypes and testing them using RF and ultrasound transmitters, analog filters, and an oscilloscope

2008

Biodesign Institute
Research Technician, September 2008 – December 2008
Contributed to the development of synthetic antibodies by verifying newly created samples using MALDI mass spectrometry and purifying them using high performance liquid chromatography (HPLC)

2007

Research Assistant, July 2005 – May 2007
Developed programs in C# and MATLAB to dynamically generate peptide sequences to enable light-directed synthesis

Tested and validated a computer program used to create digital masks

Developed a porous polymer to serve as a substrate for peptide microarrays

Contributed to the development of synthesis processes by determining stepwise yield and assessing the time required for the complete removal of a photo-labile protective group using spectrophotometry and fluorescence measurements

Acknowledged in Advanced Materials article, 'Combinatorial Screening of Biomimetic Protein Affinity Materials', published December 2008