Rafik Matta

Software Engineer

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Skills

	Experienced (> 3 years)	Intermediate (< 3 years)
Languages	C#/.NET, Java , JavaEE	Python, JavaScript, Ruby, C/C++
Frameworks	WPF, Silverlight	Boost, WCF, Node.js
Web	HTML5, CSS3	ASP.Net, ASP.Net MVC, Ruby on Rails
Databases	MySQL, Oracle	Microsoft SQL, MongoDB
Embedded Development		Freescale Kinetis, MicroChip PIC, TI MSP430/C6000, Atmel SAM4L
Project Management	Agile, SDLC	Waterfall

Experience

BMO Capital Markets
Nov 2013 - Present

Lead Software Engineer, Foreign Exchange

- Lead Software developer and architect on a $500,000 initiative for a web based CRM software for the FX Sales Team that reduced sales call turnaround time by 50% and allows for new data metrics to be mined about customers
- CRM software integrating 7 independent systems into one web application built using Silverlight 5/C#
- Created a REST Web API for accessing customers financial information, streaming real time FX prices and booking deals (JAX-RS, Redhat JBoss EAP, Hibernate JPA, WebSockets, JMS)

Iris Solutions Inc.
Aug 2014 - Present

Mobile Application Developer Consultant

- Cordova/Phonegap plugin development for iOS and Android for a social networking app
- Created a Push messaging service with NodeJS and Amazon AWS
- Created a Text Messaging service with Hapi.js (Node plugin) and Nexmo
- Created plugins for TouchID, Keychain access and Screenshot privacy/prevention

TouchFree Labs (Start Up)
May 2013 – Oct 2013

Cofounder and Software Engineer

- Started a company to develop gesture recognition software for surgeons to navigate images in a sterile operating room
- Received a $5000 grant as a part of the Entrepreneurship Hatchery Accelerator at U of T
- Created initial prototype by integrating DICOM image viewer with the Leap Motion using C#/WPF
- Developed a functional partnership with a surgical lab in Toronto Western Hospital to begin clinical and user acceptance testing and receive feedback from surgeons

Nymi Inc. (Formerly Bionym)
Apr 2012 – Apr 2013

Lead Engineer

- Lead developer in the implementation of APIs for a biometric authentication system using the heart beat
- Developed cardiac recognition software package using C#/.NET and WPF
- Implemented cardiac recognition on ARM based microprocessor for a real-time application (0.3 seconds) using C, TI MSP430 and an Atmel SAM4L
- Developed facial recognition API using C++ with Boost Framework and OpenCV
- Developed an ASP.NET MVC/WebAPI based web service as a service layer for the facial recognition API
- Developed Android and iOS client applications for Facial Recognition web service

- Attended tradeshows and developed customer relationships with 3 customers

EXFO Electro Optical Inc.

Jun 2011 – Apr 2012

Software Design Engineer

- Responsible for creating an integration testing platform for a $3 Million project
- Developed device drivers for custom made hardware and USB communication in C++
- Developed data abstraction layer for a Field Network Testing Device using C#/ .NET on Windows CE
- Implemented fault detection algorithm on TI C6000 DSP using C

Defense Research and Development Canada

May 2010 – Sep 2010

Student Researcher

- Developed a hardware-software interface between radio equipment and in house software using C# and C
- Developed a hardware box as a part of a large scale project to be used by military personnel for frequency jamming
- Reverse engineered a frequency counter-jamming unit developed in a foreign country
- Successfully debugged 3 large RF circuits using advanced signal processing testing equipment

U of T Data Management Group

May 2009 – Aug 2009

Software Developer

- Developed web application to be used by municipalities for traffic planning with data aggregated by the U of T using Java EE with Spring and Wicket Frameworks and front-end with HTML, CSS and JavaScript
- Developed database system based on PostgreSQL and Hibernate middleware to handle over 1,000,000 records

Education

University of Toronto

Sep 2007 – Jun 2011

B.A.Sc Electrical and Computer Engineering

Minor in Biomedical Engineering

Publications

- Matta R., Lau, K. H., Agrafioti F. and Hatzinakos D. (2011), Real-time continuous identification using the Heart Signal. Accepted in the IEEE CCECE Conference Proceeding

Awards

- The Edward S. Rogers Electrical Engineering Entrance Scholarship (2007) - $2500
- The J Edgar McAllister Bursary (2010) - $5000

Projects

Real time identification using the ECG as a Biometric (completed)

- Using the Electrocardiogram (ECG) as a biometric for real time user identification
- Implemented signal processing algorithm for signal filtering and classification
- Published a paper and presented findings at IEEE CCECE 2011
- Won 3rd Place for Best Design Project/Paper at the International Conference for Upcoming Engineers (ICUE, 2011)

InScribe Dictation Android Application (ongoing)

- Created a speech to text dictation android application for kids with cochlear implants to be used in a classroom environment
- Application uses Bluetooth LE and the Android Speech Recognition Engine