Nathaniel M. Rose

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Accomplished and motivated developer interested in advancing computational systems and building solutions that enable all people.

Education:

Syracuse University
L.C. Smith College of Engineering and Computer Science
Bachelor of Science; May 2014
Major: Computer Engineering
Minor: Information Technology, Design and Startups

Skills:

Development Skills:	**Languages:** C, C++, C# Java, JavaScript, XAML, Python, Logic, x86 Assembly, VHDL, SQL, PHP, R **Frameworks:** .NET 4.5+ 4.6, YARP, NACHOS, Motorola Freescale, AllJoyn **Web Dev:** HTML5, XML, Signal R, ASP.NET, Node.JS, Angular JS, Bootstrap, MEAN Stack **Cloud:** IaaS, PaaS, SaaS, Azure, IoT Hubs, Nitrogen.IO, LAMP Stack, DevOps, ML, DevOps
Software:	MultiSim, JGrasp , Maple 15, Finale, Pro Tools 9, Adobe Photoshop, Adobe Dreamweaver, MS Sharepoint, ISpace, Dashworks, MiK TeX, Fruity Loops, Serato, Robo Lab, Android Studio
Other:	iCUB, Building/ Customizing CPUs, PC Threat Security, Tech Excel, Digital Circuitry, EEG Headsets, Kinect, Muse, Public Speaking, Event Planning, 10 Years Music Experience, Steaks

Professional Work Experience:

07/14-Present **Microsoft Corp.** **San Francisco, CA**
Technical Evangelist

- Certified Microsoft Azure Solutions Architect (MCSD): License 11730319
- Architected IaaS/PaaS solutions in Microsoft Azure allowing net new companies and startups to expand cloud capabilities
- Worked with SF developer community in building projects that further the IoT, NeuroTech, and Data Science fields

07/13-08/13 **Italian Institute of Technology** **Genoa, IT**
iCUB Summer School Participant

- Introduced to basic A.I. and robotic engineering fundamentals including motor control, and neural networks
- Designed over 1200 lines of code using C++ that was used to study humanoid predictive rewards and functionality
- Studied emerging research in robotics such as visual recognition pipelines, tactile servoing, optimization and more

06/12-09/12 **JP Morgan Chase & Co.** **Jersey City, NJ**
Global Corporate Technology Infrastructure Intern

- Aided in the distribution of the Windows 7 operating system for 250,000 worldwide machines
- Used multiple skills to improve WebPages that displayed the progress of the distribution using HTML and XML
- Created training course curriculums using SCORM Conformant Content for team members

09/10-08/11 **Le Moyne College** **Syracuse, NY**
Information and Technology Consultant

- Learned to troubleshoot Laptops and Desktops for a College Campus of 5,000 students
- Repaired laptops, and tablets using Virus Remediation and System recovery and Re-Imaging
- Handled campus networking issues remotely on a Datatel system and Oracle database

Project Work:

A.I. Predictive Reward Research (2014-Present)

- In this study, the team will model the production and inhibition of dopamine signals used in the human brain to train an artificial neural network programmed into a humanoid robot. My contributions to this project will be the creation of a 2-class decision tree model that simulates dopamine receptors when a task is accomplished by the humanoid machine.

Kinect-Kannon (2014)

- The Kinect Kannon is a semi-autonomous robotic T-Shirt launcher that is augmented by Kinect for Windows. It fires by opening a valve releasing approximately 100 PSI of Carbon Dioxide.

Kinect Kar – Senior Design Project (2013-2014)

- In this project, our team used the KINECT to interface a hand tracking module that allowed a user to use their hand as a control device for a robotic car. My contributions to this project was the manipulation of the CVRL open source KINECT library to interact with our Kinect classes that outputted information to the vehicle and controlled the mounted pan tilt camera.

Troll Bridge (2015)

- Troll Bridge is an authentication Token service built for Microsoft Azure and IoT Devices. The service uses a Database to map authorized devices to Azure cloud service credentials and signatures.

Pitch Analyzer – Junior Design Project (2013)

- In this study, our design a circuit that analyzed pitches and tones inputted into the microphone and classified them based on the closest complimentary music not it matched. The music note was outputted using LEDs and saved on a monitor the displayed the past 20 notes detected. My contributions to this project was the development of the algorithm the sorted the inputted frequencies and outputted to the LEDs and VGA display.

Project Eureka: Golf-Sense (2015-Present)

- In this project, our team uses the Muse EEG Headset to stream user brain wave data into an ML trained API that generates a brain state golfing probability. The user putts, records their drains and the application returns a probability of their next drain based on current alpha neural signal

Memberships and Organizations:

- NeuroTechx SF — Member **2015**
- TealsK12 — Volunteer Computer Science Teacher **2015**
- Collegiate Science & Technology Entry Program (CSTEP) — Alum **2011**
- Institute of Electrical and Electronic Engineers (IEEE) — Member **2011**
- National Society of Black Engineers (NSBE) — President Emeritus **2013**
- Syracuse University Rugby Football Club — Alum **2011**
- TEDx Syracuse University Planning Committee — Founder **2013**

Awards and Distinctions:

- Collegiate Science & Technology Entry Program Scholar Recipient — **May 2014**
- Louise Stokes Alliance for Minorities Program Scholar Recipient — **May 2014**
- National Society of Black Engineers BCA Scholarship — **March 2014**
- National Action Council for Minorities in Engineering Scholarship — **December 2013**

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