Richard Emile Sarkis

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Summary

A practiced, experienced, and creative software programmer, and IT professional with 22 years experience. Accomplished in the design, and development of scientific software, and also the implementation of multi-component systems with complex network system management requirements, used in major academic research. Qualified in a number of programming languages, and paradigms, with focus on simple, but robust, and efficient problem solving. Strong willingness to learn new technologies, and techniques in a desire for continued self-betterment, and institutional advancement.

Education

Master of Science, Computer Science	Rochester Institute of Technology	Dec 2013
Bachelor of Science, Computer Science	University of Rochester	May 2005
Bachelor of Science, Physics and Astronomy	University of Rochester	May 2000

Skills

Languages	C, Python, Objective-C, BASH, JavaScript, Perl, PHP, C++, AWK, sed, Haskell, Lisp, Swift
Operating Systems	Apple macOS and iOS, Linux, FreeBSD, Microsoft Windows
Frameworks	Apple Cocoa, QT, GTK, Flask, Django, ZMQ
Tools	GCC, iptables, pf, Git, Mercurial, LaTex, make, Apple Xcode
Standards	POSIX, TCP, UDP, IP, ARP, SMTP, LDAP, HTTP, DNS, JSON, WebSocket, CSS, HTML/XML, Ethernet
Techniques	Code Analysis, Exploit Research, Intrusion Analysis, Development Tooling

Professional Experience

Lead Software Engineer and Architect — 1 year (Oct 2019-Present) — The LZ Dark Matter Experiment — Rochester, NY
LUX-Zeplin (LZ) is a next generation dark matter experiment, selected as one of three 'G2' (for Generation 2) dark matter experiments. Composed of many areas of engineering, this particular responsibility involved the data acqustion systems of experiment, known as the "online" system.

Software Engineer — 2 years (Oct 2017-Oct 2019) — SkuTek Instrumentation — Rochester, NY
Designed, and engineered a new data acquisition network communication software layer using Linux, C and Python, running on an instrument designed on a custom Beaglebone implementation intended for Physics research.

Adjunct Professor — 6 years (Jan 2015-Present) — University of Rochester — Rochester, NY
Fulfilled adjunct professorial duties to the Computer Science department by teaching undergraduate students on the topic of introductory programming and computer science using the Python programming language (CSC 161) and data structures and algorithms (CSC 162).

Lead Programmer/Analyst — 11 years (May 2009-Present) — University of Rochester — Rochester, NY
Supported the department of Physics & Astronomy consisting of 250 people, including 75 faculty and researchers and 100+ graduate students. Installed, configured and maintained a server infrastructure that provided network services supporting the department. Configured, diagnosed and repaired Mac, Windows, and Linux systems. Trained faculty, staff, and students one-on-one and in groups on topics such as Linux, programming, software design, or general application usage.

Senior Programmer/Analyst — 10 years (May 2000-Jul 2009) — University of Rochester — Rochester, NY
Supported an Astronomy research group consisting of faculty researchers and graduate students with specialized software development abilities in near infrared detector research. Additionally, performed in a sysadmin role by providing desktop, server, and data management for the research group.

Lead Programmer — 2 years (Dec 2005-Jul 2007) — Fermilab — Chicago, IL
Engineered and implemented a scalable, highly parallel, high-throughput particle physics event data logger that significantly improved data acquisition from the CDF detector during its Run II phase.

Co-Founder — 4 years (Dec 2003-Mar 2007) — If Then — Rochester, NY
Conceptualized and prototyped an early implementation of a Wi-Fi captive portal hotspot called "Abydos". Lead a team in the creation of a wireless captive-portal device based on this prototype using C, Python and FreeBSD.