

# Richard Emile Sarkis

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## Summary

An innovative software development and IT professional with 20 years experience in the design and development of scientific software and implementation of multi-component systems to automate complex network and system management issues. Experienced in a number of programming languages and paradigms, focusing on simple and efficient problem solving. Strong willingness to learn new technologies, programming languages, and techniques in a desire for continued self-betterment.

## 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

AWK, Apache, Apple Cocoa, Apple OS X, Apple iOS, C, Code Analysis, Ethernet, Exploit Research, Firewalls, Flask (Python), FreeBSD, gdb, Git, Haskell, IP v4/v6, ISC BIND/DHCP, Intrusion Analysis, JSON, JavaScript, LaTeX, Linux, make, Markup (HTML, XML, CSS, reStructuredText, Markdown), Objective-C, OpenLDAP, PHP, POSIX, Perl, Postfix, Python, sed, shell (sh, bash, csh) Swift, TCP, Twisted (Python), WebSocket, WebAssembly, Microsoft Windows, Xcode

## Projects

Project Name	Description	Languages Used	Date
<i>virtualbosx</i>	Apple macOS installer DMG on VirtualBox	Shell	2016
<i>coursetools</i>	Web-scraping CLI tools for course management	Python	2015
<i>ssh-fob</i>	Secured ssh-agent on untrusted computers	Shell	2013
<i>flask-boilerplate</i>	Responsive-HTML based skeleton Flask app	Python, HTML, CSS	2013
<i>Vernacular</i>	Prototype system for native/web app develop	Objective-C, Python	2013
<i>RSWebSocket</i>	Websocket protocol client framework	Objective-C, Python	2013
<i>RSWebSocketApplication</i>	Websocket app messaging protocol framework	Objective-C, Python	2013
<i>MacDV</i>	Data visualization software for Astronomers	Objective-C, Python	2008
<i>Consumer/Server Logger</i>	Data logger for CDF project at Fermilab	C, C++, TCL, Shell	2006
<i>Abydos</i>	Captive portal for Wi-Fi management	C, Python	2003

## Work Experience

**Adjunct Professor** — 3 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).

**Senior Programmer/Analyst** — 9 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.

**System Administrator** — 5 years (Jun 1995-May 2000) — MLS Online — Rochester, NY

Innovated the running of a groupware software product as use as a subscription-based bulletin board system. Drove user growth at technology conventions, and managed the community of users.