

## TECHNICAL SUMMARY

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**Languages** C, C++, Objective C, C# .NET, Java, Visual Basic .NET, VB6, M, Python, Bash, *Mathematica*, Emacs Lisp/Common Lisp/Scheme, SQL, TeX, and `exp13`

**Software** *Emacs*, *git*, Microsoft *Word*, *Excel*, *Powerpoint*, *Publisher*, *OneNote*, *Visio*, and *Outlook*, Adobe's *After Effects*, *Premiere Pro*, *Audacity*, *Redmine*, *Eclipse*, *Travis CI*, *Wordpress*, and *Visual Studio 2008–2013*

**Operating Systems** Windows 7+, Mac OS X, and Red Hat Enterprise Linux 5/6

**Communication** Excellent communication skills, both written and oral, with experience in literate programming

## SELECTED PROFESSIONAL EXPERIENCE

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Software Developer  
Jan 2015–(Current)  
Epic Systems Corporation  
Verona, WI

- Familiarized myself with a complex, schemaless database structure with multiple concurrently supported implementations.
- Developed a prototype database language (fully compatible with our existing stack) to ease server-side development.
- Owned and held responsibility for the main selling point of our software (Stork  $\subset$  Epic) with integrations into many other functional areas of the larger ecosystem.
- Communicated with customers to use their expertise in finding the most appropriate solution to a present problem.

Junior Software Dev.  
June 2014–Jan 2015  
General Dynamics  
Fairfax, VA

- Maintained and enhanced existing software solution using X programming.
- Redesigned graphics foundation layer to adhere to best practices in object-orientation.
- Consolidated duplicated logic and functionality into an NFS mount manager.

Server Administrator  
Sept 2013–May 2014  
St. Mary's College  
St. Mary's City, MD

- Prepared and implemented an authenticated documentation server using *Redmine*.
- Maintained the hardware, software, firewalls, and other security measures for the department's subnetwork of 10–15 servers (both physical and virtual) via remote Linux administration using `ssh`/PuTTY.

Intern  
May–Sept 2013  
Progeny Systems, Inc.  
California, MD

- Created, documented, and maintained several virtual systems and virtualized existing infrastructure systems with vSphere/KVM via primarily remote Linux administration.
- Independently responded to and resolved non-critical emergency situations swiftly with minimal down-time or impact to end-users.

## EDUCATION AND ACADEMIC EXPERIENCE

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Computer Science, B. A.  
G. P. A./Major: 3.6/3.9  
St. Mary's College  
2010–2014  
Lexington Park, MD

**Coursework** *Data Structures and Algorithms*, *Design and Analysis of Algorithms*, *Theory of Computation*, *Programming Languages*, and *Small-Scale Computing*

**Honors** Dean's List (G. P. A.  $\geq$  3.5) each semester; Senior Award in Computer Science

**Research** Worked under Dr. Alan Jamieson in simulating self-stabilizing algorithms. See <http://github.com/vermiculus/ssa-tool>.

**Abroad** Studied abroad at *University College Dublin* in the Republic of Ireland. Worked with Dr. Pádraig Cunningham researching named-entity recognition and social network analysis in English literature. (Jan–May 2013)  
See <http://github.com/vermiculus/snael>.

## PERSONAL INFORMATION

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- Experienced user of L<sup>A</sup>T<sub>E</sub>X, a system used to produce documents of high quality and typographical consistency.
- Currently an official representative of StackExchange to the international T<sub>E</sub>X User's Group.
- Contributed T<sub>E</sub>X extension packages to CTAN.
- Edited and produced a promotional video for a [diversity program](#) at St. Mary's College (archived).
- Maintain/contribute to several [open-source projects](#) using more conventional languages, such as Emacs Lisp, Python, Java, C, and Objective C. (Contributions range from testing to discussion to design to program code.)

## OPEN SOURCE CONTRIBUTIONS

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{GITHUB.COM/VERMICULUS}

<a href="#">StackAPI</a>	<code>vermiculus/stack-api</code>	XML, XSLT, XSD, XPath, Python
Language-native method stub and type generation using a scraped API		2014 – (Current)
<a href="#">sx.el</a>	<code>vermiculus/sx.el</code>	Emacs Lisp
An ongoing project to create a full-featured StackExchange mode for Emacs		2013 – (Current)
<a href="#">ssa-tool</a>	<code>vermiculus/ssa-tool</code>	Python, NetworkX, PyYAML
An editor for and simulator of self-stabilizing algorithms		2013 – (Current)
<a href="#">S. N. A. E. L.</a>	<code>vermiculus/snael</code>	Python
A natural language analyzer that constructs social networks		Jan – May 2013
<a href="#">MobileOrg</a>	<code>MobileOrg/mobileorg</code>	Objective C
An asynchronous iOS complement to Emacs' OrgMode		May 2013
<a href="#">AUC<sub>T</sub>E<sub>X</sub>-Lua</a>	<code>vermiculus/auctex-lua</code>	Emacs Lisp
An extension to AUC <sub>T</sub> E <sub>X</sub> to support embedded Lua code		Aug 2013
<a href="#">ButterSeal</a>	<code>vermiculus/butterseal</code>	(LibGDX) Java
An Android game written for <i>Game Design and Development</i>		Sept – Dec 2013
<a href="#">C-UTIL</a>	<code>vermiculus/c-util</code>	C
A set of object-oriented utilities for ANSI C		2012 – (Current); Stagnant
<a href="#">LDA/SMC Website</a>		WORDPRESS, discountASP
A new website for the local Learning Disabilities Association		March 28 – 30 2013

## RELEVANT INTERESTS

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I have several interests in which I have no formal training, but have significant experience. These include:

- structured documents, especially in the context of ↓
- custom electronics, and
- literate programming – a documentation-centric paradigm for software development and reproducible research,
- typography.

Additional details on my projects and interests can be found at <http://www.seanallred.com>.