

# Joseph Voss

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EDUCATION	<b>Bachelor of Science, Mechanical Engineering</b> , University of Texas at Austin	Aug 2014 – May 2018
	Related Courses: Advanced Mechatronics II, Parallel Computing, Programming and Engineering Computational Methods, Heat Transfer, Engineering Vibrations, Machine Elements, Material Engineering, Fluid Mechanics, Thermodynamics, Solids, Statics, Engineering Design and Graphics, Differential Equations, Matrices and Matrix Calculations, Engineer Statistics, Engineering Communication	
	<b>Study Abroad</b> , IES Abroad: Vienna, Austria	May 2015 – Jun 2015
EXPERIENCE	<b>Texas Advanced Computing Center</b>	
	<ul style="list-style-type: none"><li>Student Intern, High Performance Computing<ul style="list-style-type: none"><li>Developed an automated HPC testing harness using Jenkins, PyTest, and CMake that integrates seamlessly with SLURM</li><li>Created a heatmap visualization using Bokeh, showing historical degradation and improvement in system performance</li><li>Submitted a research paper describing the test harness developed to the HPC System Professionals Workshop at Supercomputing Conference 17.</li><li>Led several workshops describing the usage of the testing harness</li></ul></li></ul>	Jun 2017 – Aug 2017
	<ul style="list-style-type: none"><li>Team Member, Student Cluster Competition<ul style="list-style-type: none"><li>Designed, built and managed a cluster of high performance compute nodes</li><li>Developed remote power monitoring system using SNMP, Graphite, and Grafana</li><li>Learned how to use and profile several HPC applications</li><li>Attended Supercomputing Conference 2016 to compete with student teams from around the world, placed 4<sup>th</sup> overall</li><li>Published a reproducibility study to the Parallel Computing journal.</li></ul></li></ul>	Feb 2016 – Mar 2017
	<b>Trident Research LLC</b>	
	<ul style="list-style-type: none"><li>Mechanical Engineer Intern<ul style="list-style-type: none"><li>Designed and assembled charging system for naval buoys</li><li>Created drawings and 3D models in Solidworks of custom parts</li><li>Wrote embedded firmware for safe charging of buoys</li><li>Completed acceptance testing for both custom and COTS parts</li><li>Wrote and updated documentation of the naval buoy system</li></ul></li></ul>	Jun 2016 – Aug 2016
	<b>Applied Research Laboratory</b>	
	<ul style="list-style-type: none"><li>Student Technician, Space and Geophysics Lab<ul style="list-style-type: none"><li>Redesigned the method of reading/writing out RINEX files to use OOP encapsulation</li><li>Updated the in-house code base to use the new RINEX objects for file I/O</li><li>Extensive cataloging of the applications within the in-house code-base</li></ul></li></ul>	Jul 2015 – Aug 2015
	<ul style="list-style-type: none"><li>Student Technician, Space and Geophysics Lab<ul style="list-style-type: none"><li>Created a suite of cross-compatible unit tests in C++ for open source software</li><li>Developed testing framework based off CMake/CDash/CTest suite</li></ul></li></ul>	Jan 2015 – May 2015
	<ul style="list-style-type: none"><li>Science and Engineering Apprentice, Space and Geophysics Lab<ul style="list-style-type: none"><li>Developed an inexpensive COTS GPS data collection platform using Python</li><li>Wrote software capable of decoding binary streams, translating to the floating point representation, and writing out to formatted RINEX file</li><li>Interfaced with GPS receiver mounted on a DIP via serial communication</li></ul></li></ul>	May 2014 – Aug 2014
SKILLS	Solidworks, C++, Python, Git, Bash, CMake, Jenkins, Linux management & development, Soldering, MATLAB, $\LaTeX$ , Microsoft Word, Microsoft Excel, Basic machining and assembly experience.	
PUBLICATIONS	Voss, J., Garcia, J. A., Proctor, W. C., & Evans, R. T. (Submitted). Automated System Health and Performance Benchmarking Platform. In <i>Supercomputing Conference '17: Proceedings of the 2nd international HPC System Professionals Workshop at SC'17</i> . New York, NY, USA: ACM.	
	Ababao, R., Garcia, J. A., <u>Voss, J.</u> , Proctor, W. C., & Evans, R. T. (2017). "Student Cluster Competition 2016 reproducibility challenge: Genomic partitioning with ParConnect." <i>Parallel Computing</i> . <a href="https://doi.org/10.1016/j.parco.2017.07.002">https://doi.org/10.1016/j.parco.2017.07.002</a>	
PROFESSIONAL ACHIEVEMENTS	Terry Foundation Scholar	2014– Current
	Presidential Achievement Scholar	2014– Current
	Eagle Scout, Troop 3	2012