

# Joseph Voss

5610 Abilene Trail, Austin, TX 78749, USA

<http://jvoss14.com> • +1 (512) 517-0468 • [josephvoss14@gmail.com](mailto:josephvoss14@gmail.com)

EDUCATION	<b>Bachelor of Science, Mechanical Engineering</b> , University of Texas at Austin 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	Aug 2014 – May 2018  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 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></ul></li><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> <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> <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 the OOP principle of 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><li>Student Technician, Space and Geophysics Lab<ul style="list-style-type: none"><li>Created a suite of cross-compatible unit tests in C++</li><li>Helped develop in-house testing framework</li><li>Wrote documentation for how later unit testing should be executed</li></ul></li><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 them 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>	Jul 2017 – Aug 2017  Feb 2016 – Mar 2017  Jun 2016 – Aug 2016  Jul 2015 – Aug 2015  Jan 2015 – May 2015  May 2014 – Aug 2014
SKILLS	Solidworks, C++, Python, Git, Bash, CMake, Jenkins, Linux management & development, Soldering, MATLAB, L <sup>A</sup> T <sub>E</sub> X, Microsoft Word, Microsoft Excel, Basic machining and assembly experience.	
PROFESSIONAL AFFILIATIONS	Terry Foundation Scholar Eagle Scout, Troop 3 Presidential Achievement Scholar Member, Programmers in Science and Engineering	2014– Current 2012 2014– Current 2016– Current
PUBLICATIONS	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>	