

Joseph Voss

5610 Abilene Trail, Austin, TX 78749, USA
<http://jvoss14.com> • +1 (512) 517-0468 • josephvoss14@gmail.com

EDUCATION	Bachelor of Science, Mechanical Engineering , 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 Study Abroad , IES Abroad: Vienna, Austria	Aug 2014 – May 2018 May 2015 – Jun 2015
EXPERIENCE	Texas Advanced Computing Center <ul style="list-style-type: none">Student Intern, High Performance Computing<ul style="list-style-type: none">Developed an automated HPC testing harness using Jenkins, PyTest, and CMake that integrates seamlessly with SLURMCreated a heatmap visualization using Bokeh, showing degradation and improvement in system performanceSubmitted a research paper describing the test harness developed to the HPC System Professionals Workshop at Supercomputing Conference 17.Team Member, Student Cluster Competition<ul style="list-style-type: none">Designed, built and managed a cluster of high performance compute nodesDeveloped remote power monitoring system using SNMP, Graphite, and GrafanaLearned how to use and profile several HPC applicationsAttended Supercomputing Conference 2016 to compete with student teams from around the world, placed 4th overallPublished a reproducibility study to the Parallel Computing journal. Trident Research LLC <ul style="list-style-type: none">Mechanical Engineer Intern<ul style="list-style-type: none">Designed and assembled charging system for naval buoysCreated drawings and 3D models in Solidworks of custom partsWrote embedded firmware for safe charging of buoysCompleted acceptance testing for both custom and COTS partsWrote and updated documentation of the naval buoy system Applied Research Laboratory <ul style="list-style-type: none">Student Technician, Space and Geophysics Lab<ul style="list-style-type: none">Redesigned the method of reading/writing out RINEX files to use the OOP principle of encapsulationUpdated the in-house code base to use the new RINEX objects for file I/OExtensive cataloging of the applications within the in-house code-baseStudent Technician, Space and Geophysics Lab<ul style="list-style-type: none">Created a suite of cross-compatible unit tests in C++Helped develop in-house testing frameworkWrote documentation for how later unit testing should be executedScience and Engineering Apprentice, Space and Geophysics Lab<ul style="list-style-type: none">Developed an inexpensive COTS GPS data collection platform using PythonWrote software capable of decoding binary streams, translating them to the floating point representation, and writing out to formatted RINEX fileInterfaced with GPS receiver mounted on a DIP via serial communication	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 ^A T _E X, Microsoft Word, Microsoft Excel, Basic machining and assembly experience.	
PUBLICATIONS	<u>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.</u> 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> . https://doi.org/10.1016/j.parco.2017.07.002	
PROFESSIONAL ACHIEVEMENTS	Terry Foundation Scholar Eagle Scout, Troop 3 Presidential Achievement Scholar	2014– Current 2012 2014– Current