

Neal D. Nesbitt

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Are you ready to do what it takes for better code, or do you shy away from impact at every turn?
If you strive for real, stable progress, then you will find my insights, resourcefulness, and determination an asset. I thrive in back-end development, but I excel at learning and doing what is best for the task at hand.

If you've done something twice, script it the third time.

Work Experience

Sr. Software Developer Feb. 2021 - Present	Hexagon PPM , Greater Huntsville, Alabama <i>CAD Software Company - Math, Geometry & Topology Libraries</i> <ul style="list-style-type: none">- Streamlined repetitive tasks by creating and publicizing scripts- Developed new tools allowing embedded attribute debugging of CAD models- Initiated separate "unstable" DevOps repositories for safe, collaborative development- Migrated libraries from Visual Studio projects to portable, modern CMake builds- Enabled source control visibility of documentation by instigating format change
Technical Specialist July 2014 - Aug. 2015	D. Nesbitt Associates , Greater Houston, Texas <i>Engineering Support Services</i> <ul style="list-style-type: none">- Traveled on-site to support global steam blowing & chemical cleaning operations- Helped standardize new industry tools with adaptive fabrication diagrams- Designed and managed novel wastewater membrane R&D system
Blacksmith Mar. 2010 - Feb. 2012	George Ranch Historical Park , Greater Houston, Texas <ul style="list-style-type: none">- Orchestrated public forging demonstrations for large crowds- Initiated in-house charcoal production, mitigating fuel limitations

Education

Math PhD Student Sep. 2018 - March 2020	The University of Houston Prelims - <i>Numerical Analysis, Probability</i> Research - Authored C++ biochemical simulation libraries Teaching Assistant (TA) - Ran multi-variable calculus recitations SIAM Webmaster - Updated and maintained chapter's website
MS in Mathematics Sep. 2015 - Aug. 2018	The University of Houston-Clear Lake <i>Finite Elements, Computational Physics, Electrodynamics</i> Research Assistant (RA) - Model Predictive Control, Algebra TA
BS in Mathematics Sep. 2012 - May 2014	Houston Baptist University <i>Differential Geometry, Complex Variables, Real Variables</i>

Skills

Development:	Vim, Visual Studio, Markdown, Git, Terminals, Linux & Windows
Coding:	C/C++, CMake/Make, Python, Scheme, Bash/Batch, MATLAB, \LaTeX
Hobbies:	Cooking, Climbing, Dance, T.Tennis, Shop-work, Model Railroads, Radio

Publications

Yipeng Yang and Neal Nesbitt. "Concise iterative algorithms on the state feedback form for model predictive control and stability analysis of discrete linear systems". In: *2017 IEEE Symposium Series on Computational Intelligence* (Honolulu, Hawaii, Nov. 27, 2017). IEEE, 2018, pp. 2130–2133. ISBN: 9781538627259

Neal David Nesbitt. "Fundamentals of axis-symmetric boundary reconstruction for ideal tokamak plasmas: Using toroidal harmonics to match poloidal flux measurements in the surrounding vacuum." MA thesis. The University of Houston-Clear Lake, 2018. ISBN: 978043841249