

You have a job that needs doing. Are you ready, or do you shy away because of impact?
I strive for real, stable progress, and I would like an agile team that does as well.

If we are realistic about our expectations, you will find my enthusiasm, resourcefulness, and dogged determination an asset. I excel at learning whatever is best for the task at hand.

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

Work Experience

Software Developer July 2022 - Present	Autodesk , Portland, Oregon <i>T-Splines - Smooth Form Modelling Libraries</i> <ul style="list-style-type: none">- Rebuilt CI/CD pipeline, consolidating processes, saving build time, reducing maintenance- Developed tessellation algorithm, giving accurate results in previously difficult situations- Expanded cross platform capabilities to enable full Linux builds and C++20
Sr. Software Developer Feb. 2021 - July 2022	Hexagon PPM , Huntsville, Alabama <i>CAD Software - Math, Geometry & Topology Libraries</i> <ul style="list-style-type: none">- Independently developed tools allowing detailed attribute debugging of CAD models- Migrated libraries from Windows dependent projects to portable, modern CMake builds
Technical Specialist July 2014 - Aug. 2015	D. Nesbitt Associates , Houston, Texas <i>Engineering Support Services</i> <ul style="list-style-type: none">- On-site support of global steam blowing & chemical cleaning operations- Helped standardize new industry tools with parametric fabrication diagrams- Designed and managed novel R&D wastewater recovery system

Education & Research

Math PhD Student Sep. 2018 - March 2020	The University of Houston Prelims - <i>Numerical Analysis, Probability</i> Research - C++ biochemical simulations for inference rules 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 - Model Predictive Control
BS in Mathematics Sep. 2012 - May 2014	Houston Baptist University <i>Differential Geometry, Complex Variables, Real Variables</i>

Skills

Development:	Visual Studio, VS Code, Vim, Git, Markdown, Terminals
Coding:	C/C++, CMake, Python, Bash/Batch, Scheme, MATLAB, \LaTeX
Hobbies:	Cooking, Music, Shop-work, Dance, Climbing, T.Tennis, Ham 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