Nhan (Steve) Nguyen

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Profile Summary

Mechanical Engineering graduate with 1.5 years of experience across manufacturing operations and R&D software development. Proven in process improvement, equipment reliability, and building engineering tools using Python and MATLAB, with strong hands-on mechanical and software project experience.

Technical Skills

Programming & Simulation: MATLAB, Python, Simulink, Finite Element Analysis (FEA)
Design & CAD: SolidWorks, CNC Trajectory Modeling, MSC ADAMS, GD&T
Process & Manufacturing: Lean Manufacturing, 5S/Kaizen, Continuous Improvement, Root Cause Analysis, Reliability Engineering
Dev & Tools: DevOps, Jira, PyCharm, VS Code, Jenkins, CI/CD, Microsoft Office

Work Experience

Manufacturing Engineer Sep. 2024 – Apr. 2025
Procter & Gamble
- Standardized packaging equipment maintenance across 7 production lines, saving $70,000 annually.
- Developed, digitalized, and maintained 2,200+ equipment standards, increasing MTBF by 50%.
- Designed reliability-focused solutions that reduced failures and projected $22,771 annual savings.
- Standardized alarm configurations for 28 machines (3,500+ parameters), boosting line efficiency by 15% in 4 months.

Software Tool Developer Aug. 2022 – Aug. 2023
Bosch R&D Automotive
- Enhanced in-house MATLAB/Python simulation tools for electric motor design, optimizing fatigue analysis workflows.
- Increased automated test coverage from 40% to 90% via new MATLAB testing scripts, improving software stability.
- Authored release documentation that accelerated adoption and eliminated weeks of manual Excel calculations.
- Applied DevOps, CI/CD to integrate new features while preserving backward compatibility.

Engineer Projects

Advanced Finite Element Method | *MATLAB* Jan. 2024 – Apr. 2024
- Built nonlinear elastic FEA models to improve deformation prediction accuracy for 2D structures.
- Simulated tensile and shear loading using incremental and modified Newton–Raphson methods.
- Implemented elastic–plastic stress update (UMAT-like) for simple shear deformation.

Precision Control System | *MATLAB, Simulink* Aug. 2023 – Dec. 2023
- Developed multi-axis trajectory generator for a virtual CNC system (cubic splines, jerk-limited profiling, interpolation).
- Modeled feed drive dynamics via Least Squares; applied frequency response measurement and Kalman filter friction modeling.
- Designed PID + feedforward with loop-shaping to enhance drive tracking and smoothness.

Education

University of Waterloo Waterloo, ON
Master of Engineering in Mechanical and Mechatronics Engineering (GPA: 84.75) *Aug. 2023 – Aug. 2025*

University at Buffalo Buffalo, NY
Bachelor of Science in Mechanical Engineering, Magna Cum Laude (GPA: 3.55) *Aug. 2018 – Jun. 2022*