

Mohamed Kheshouei

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EDUCATION

Louisiana State University

Expected May 2029

Bachelor of Science in Mechanical Engineering, College of Engineering

UNDERGRADUATE RESEARCH

Undergraduate Research — Lead — Dept. of Industrial & Systems Engineering, LSU 2025–Present

Project: Measurement-Guided Additive Manufacturing for Quantum Technology Components

- Independently designed and executed a closed-loop quality assurance framework integrating advanced imaging and 3D metrology to improve dimensional accuracy of additively manufactured components.
- Designed quantum technology components using CAD and fabricated them via FDM 3D printing (Bambu Lab A1); performed iterative parameter optimization to reduce geometric deviations.
- Conducted high-resolution X-ray CT scanning and CMM scanning using a Creaform Raptor Blue Laser handheld 3D scanner to capture surface geometry and perform deviation analysis.
- Analyzed measurement data including surface tolerances, circle diameter deviations, and area measurements across multiple part variants (P1, P2, P3) to validate printed vs. designed dimensions.
- Presented findings at LSU Research Week 2026 poster session; received faculty guidance on research direction and methodology while independently carrying out all experimental and analytical work.

EXPERIENCE

Arabic Language Tutor (Volunteer) — AMAANA & Local Community Centers — New Orleans, LA Jun 2023–Present

- Instructed children, including students with special needs, in Arabic reading and writing; developed personalized lesson plans.
- Adapted teaching strategies to diverse learning styles, fostering engagement and building strong relationships.
- Collaborated with fellow volunteers to share resources and continuously refine instructional methods.

Library Volunteer — Jefferson Parish Library — New Orleans, LA

Jun 2024–Aug 2024

- Organized materials and supported patrons in locating resources throughout the library.
- Maintained a quiet, productive environment for study and assisted diverse visitors, strengthening customer service skills.

3D Printing & Mechanical Design Projects — Independent

Ongoing

- Built, repaired, and calibrated a Bambu Lab A1 printer; diagnosed printing issues and designed optimized models using multiple filaments (PLA, TPU, PETG).
- Designed custom Gridfinity storage boxes and holders for irregularly shaped items.
- Created a hinged pyramid model for a school festival that opens to reveal its interior structure.

CERTIFICATIONS & SKILLS

Certifications: Adobe Illustrator Certified, AutoCAD Student Certification

Technical Skills: AutoCAD & 3D Design, Adobe Illustrator & Photoshop, Unity (C#), FDM 3D Printing & Calibration, 3D Scanning & Metrology, CAD Modeling

LANGUAGES

Arabic (Fluent) | **English** (Fluent)