

Mohamed Kheshouei

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EDUCATION

Louisiana State University

Expected May 2029

Bachelor of Science in Mechanical Engineering | Minor in Robotics

TECHNICAL SKILLS

Design and fabrication: Fusion 360, AutoCAD, CAD modeling, technical drawings, FDM 3D printing and calibration, PLA / TPU / PETG, 3D scanning and metrology

Robotics and software: Camera calibration, color detection, robot motion mapping, Arduino, Unity / C#, Adobe Illustrator and Photoshop

ENGINEERING PROJECTS

Vision-Guided Robot Arm

- Calibrated a camera-to-table coordinate mapping using four known robot positions to locate objects in the robot's workspace.
- Used color detection to identify objects and convert image positions into robot coordinates for pick-and-place movement.

Robot Imitation System

- Mapped motion from a smaller demonstration robot to a larger robot so it could reproduce the movement; recorded demonstrations for future learning experiments.

Spherical Flexure Joint and NFC Fidget Toy

- Modeled a compliant joint in Fusion 360, exploring motion range, stress concentration, and printability through geometry iterations.
- Designed a personalized fidget toy with a two-position spring mechanism and an NFC tag embedded in the printed body.

Reverse Engineering Project

ME 1212

- Disassembled and documented a sander with a four-person team; contributed dimensional analysis, component drawings, and technical documentation.
- Recorded assembly sequence, tolerances, and manufacturing processes for the final report and presentation.

Ultrasonic Radar Scanner

- Built an Arduino-based scanner using an HC-SR04 sensor, servo, and buzzer; programmed distance sweeps and designed a protective enclosure.

EXPERIENCE

Arabic Language Tutor | Volunteer

Jun 2023 – Present

AMAANA & Local Community Centers | New Orleans, LA

- Taught Arabic reading and writing to children, including students with special needs; adapted lesson plans to individual learning styles and shared teaching resources with volunteers.

Library Volunteer | Jefferson Parish Library

Jun – Aug 2024

- Organized library materials and helped patrons locate resources in New Orleans, LA.

ADDITIONAL

Certifications: Adobe Illustrator Certified; AutoCAD Student Certification

Languages: Arabic and English, fluent

Research: Coauthored an LSU Research Week 2026 poster on measurement-guided additive manufacturing for quantum technology components.