

Tisha Maryam

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EDUCATION

Texas A&M University, College Station, TX
B.S. Materials Science and Engineering

Expected Graduation May 2027
GPA: 3.2/4.0, Upperclassman GPA : 3.6/4.0

EXPERIENCE

HexaTech, Inc. Raleigh, NC
R&D Process Engineering Intern

May 2026 – August 2026

- Eliminated wafer cracking (40% to 0%) and cut processing costs 55% by designing and executing 4 JMP DOEs to optimize feed load, direction, water usage, and grind time.
- Cut manual logging errors by over 50% by building an AI-based wafer tracking system using wafer ID and process records, now deployed company-wide.
- Authored 3 SOPs standardizing wafer grinding, polishing, CMP and metrology procedures to improve consistency.
- Resolved wafer-sawing defects by tracing root cause to upstream process conditions, prompting a company-wide process review.

National Corrosion and Materials Reliability Lab (NCMRL) Bryan, TX
Undergraduate Research – Project on Vehicle Corrosion Prevention

June 2025 – May 2026

- Investigated corrosion failures across 300+ Toyota specimens by correlating coating conditions with failure behavior using SEM/EDS, optical microscopy, and 3D surface profilometry.
- Optimized coating thickness from 4-30 microns, maintaining corrosion protection through 30 days of accelerated thermal and salt-fog testing.

PROJECTS & LEADERSHIP

Aluminum Deposition Stress Modeling, Samsung Austin Semiconductor
Team Lead – Senior Capstone Project

August 2026 – May 2027

- Leading a multidisciplinary team to develop a COMSOL thermomechanical model to simulate time-dependent stress accumulation and transient heating during thin film aluminum PVD deposition.
- Developing an AI-based image analysis method to map whisker density and crystallographic texture for experimental model validation.

Aggies Invent, Texas A&M University

April 2026

Semiconductor Hardware Resilience Challenge – 1st Place

- Co-developed ChipCert, a counterfeit semiconductor screening software using unique electric linearity signatures to detect material and process related device variation, earning 1st place and \$5,000 in a 48-hour challenge.

Women in Materials Science (WIMS), Texas A&M University

President, Former Vice President

August 2025 – Present

- Led weekly officer meetings and coordinated workshops for a 30+ member organization, implementing engagement strategies to increase attendance and coordinating STEM outreach programs for Girl Scouts.

SKILLS

Processing & Characterization: DOE, Root-Cause Analysis, XRD, Rocking-Curve Analysis, SEM/EDS, Surface Profilometry
Wafer Grinding/Polishing, CMP, Wafer Handling, Cleanroom Processing

Software & Simulation: JMP, Python, COMSOL, MATLAB, R, SolidWorks, Siemens NX, ANSYS, GSAS-II, ImageJ