Dhira Vejendla

dhira@tamu.edu | (832) 453-1267 | College Station, TX

Education

Texas A&M University — Expected Dec 2028
Bachelor of Science in Materials Science and Engineering — GPA: 3.70/4.00

Work Experience

Phase Transformation Engineering Lab | Texas A&M University — College Station, TX
Undergraduate Research Technician — *Sep. 2026 – Present*

- Independently operated Differential Scanning Calorimetry (DSC) and Laser Flash Analysis (LFA) instruments for thermal characterization of material samples.
- Supported phase change material research for thermal energy storage through sample preparation, thermal cycling equipment maintenance, and collection of experimental testing data.

Materials Technology Group | University of Houston — Houston, TX
Research Intern — *Jun. 2026 – Jul. 2026*

- Synthesized chromium-doped alumina (ruby) using precipitation, heat treatment, and ball milling techniques for materials processing.
- Prepared steel substrates through metallographic grinding and polishing, then applied ruby-doped alumina coatings using laser-assisted sputtering.
- Analyzed Raman spectroscopy measurements to evaluate strain in steel from ruby fluorescence peak shifts during controlled heating.

Kumon — Katy, TX
Center Assistant — *Jul. 2024 – Sep. 2024*

- Taught math and English to students in grades K–12; graded assignments and communicated with parents regarding student coursework.

Engineering Projects

Ignite Student Challenge — College Station, TX
Participant — *Fall 2025*

- Designed a SolidWorks mount to connect the rear wing to the chassis of an FSAE race car.
- Evaluated material options to balance durability, weight, and cost in the mount design.
- Performed Finite Element Analysis (FEA) simulations under multiple load cases (drag, downforce, and acceleration) to evaluate stress, strain, and displacement of the mount.
- Documented project methods, material selection, and FEA results in a final technical engineering report.

Leadership & Volunteering

Junior Tennis Partners (501(c) nonprofit) — Katy, TX
Coach — *Aug. 2023 – May 2025*

- Coached tennis for over 180 children ages 5–13.
- Wrote grant proposals and coordinated with the Texas USTA branch to obtain funding and implement targeted lessons.
- Helped raise over $11,000 to improve the program for low-income families and support the charity.

Skills & Interests

Technical Skills: SolidWorks, Python, Java, Git, Microsoft Excel, Microsoft Word, Microsoft Powerpoint
Interests: Rock Climbing, Tennis, Basketball, Reading