Nikhil Turlapati
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SUMMARY

Petroleum Engineering student at Texas A&M with hands-on mechanical experience troubleshooting complex failures. Conducting experimental geochemistry research on reaction-driven permeability change in olivine-rich formations, with prior research in deep learning for PPE recognition on drilling platforms. Strong foundations in petrophysics, production systems, fluid dynamics, and risk analysis.

EDUCATION

Texas A&M University — College Station, Texas
B.S. in Petroleum Engineering — May 2027
Petrophysics, Transport Processes, Formation Evaluation, Risk Analysis, Production Systems, Reservoir Engineering, Fluid Dynamics

RELEVANT PROJECTS

Geoenergy Systems Laboratory at Texas A&M University — College Station, Texas
Research of Reaction-Driven Permeability in Olivine-Rich Formations — May 2026 – Current

- Designing flow-through reactor experiments testing whether elevated aqueous silica activity suppresses brucite formation during 20 °C olivine hydration, a control on CO2 storage injectivity and wellbore integrity
- Derived sodium metasilicate injection fluid held at 80% of amorphous silica saturation from published solubility and speciation models; validated saturation indices in Visual MINTEQ and PHREEQC
- Built a falling-head permeameter to measure permeability across two olivine grain-size fractions; characterizing pore network evolution by micro-CT, XRD, and SEM and authoring the manuscript methods

Joe B. Foster Student Paper Contest – 3rd Place Winner — College Station, Texas
Research Project — August 2025 – January 2026

- Researched deep learning algorithms for PPE recognition to improve personnel safety on onshore and offshore drilling and production platforms
- Evaluated feasibility of deploying computer vision models in hazardous conditions, accounting for variable environments and operational constraints

Texas Aimbots — College Station, Texas
Suspension Design Lead — September 2023 – March 2024

- Directed suspension system development for competition robot at 20 hours per week, covering CAD, manufacturing, and assembly
- Employed use of SolidWorks and OnShape to design CAD, and programmed robot using Java and C++

EXPERIENCE

Kwik Kar Auto Repair — Allen, Texas
Mechanic — May 2024 – August 2024

- Diagnosed and repaired engine, brake, and suspension issues for 40+ customers per day, improving vehicle performance and safety

Bike Mart — Frisco, Texas
Service Technician — July 2021 - August 2023

- Streamlined service with a new maintenance checklist, cutting repair turnaround time and setting a $2,000 per day department goal

LEADERSHIP

FRC Team 6901 — Frisco, Texas
Captain & Mentor — June 2020 - Current

- Designed and built electrical board and pneumatic systems for nationwide competition
- Trained members on g-code milling and advanced controller integration techniques

TAMU Off-Road Club — College Station, Texas
Vice President — December 2024 – Current

- Performed and supported mechanical repairs and diagnostics during off-road field trips

Society of Petroleum Engineers TAMU Chapter — College Station, Texas
Media Committee Member — July 2025 – Current

SKILLS, ACTIVITIES & INTERESTS

Languages: Conversational proficiency in Telugu and Tamil
Technical Skills: Python, PHREEQC, Visual MINTEQ, SolidWorks, Fusion360, Inventor, XRD/SEM analysis, automotive repair, OpenLab
Interests: Automotive restoration, robotics, camping, travel, rock climbing, photography, golf