

AXEL ADAIR

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EDUCATION

Texas A&M University, College Station, TX
Bachelor of Science, Mechanical Engineering
Business Minor

Graduating in August 2021
GPA: 3.31/4.0

EXPERIENCE

Texas A&M Turbomachinery Lab

Undergraduate Researcher

September 2020 - Current

- Manufacturing and assembling main test rig for thrust bearings and associated subassemblies.
- Troubleshooting the test rig and wiring thermocouples and heating tape for piping.

Entegris, Burnet, TX

Summer 2020

Reliability Engineering Intern

- Conducted root cause analysis on operational pumps within the factory.
- Performed pump vibration analysis to identify irregular trends.
- Created a new pump failure data tracking system in SAP and MS Excel.
- Developed operational and maintenance solutions to preserve functionality of vacuum pumps that saved a minimum of \$28,000 per year.
- Aided in FMEA analysis of the operating pumps and their corresponding systems.
- Coordinated with external vendors on maintenance solutions and potential implementation methods.

Texas Department of Transportation, Cedar Park, TX

Summer 2019

Engineering Technician Intern IV

- Prepared road samples for shear and surface compressibility testing and ensure testing samples meet density requirements.
- Utilized test data to propose new sample compositions to improve road core durability.
- Wrote state-wide testing procedure that decreased process time by approximately 60% and improved on previous asphalt extraction methods for TXDOT Materials Labs.

Engineering Technician Intern II

Summer 2018

- Used Microstation to create full plan sets for four upcoming projects and mapped out cross sections for those designated areas.
 - Created estimates for upcoming projects using PowerTerm software totaling approximately \$5 million dollars.
 - Utilized MS Excel to generate Gantt charts for project timelines to be completed within the next two years.
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EXTRACURRICULAR ACTIVITIES AND PROJECTS

Sophomores Advancing in Leadership

September 2018 - Current

Executive Director of Finance, Director Staff, General Member

- Lead weekly meetings for Service Committee members (20).
- Coordinate with local non-profit groups to organize service events.
- Modify organization's budget to allow for different service and social events.

Chemical Injection Device, Texas A&M

August 2020 – Current

Capstone Project

- Using SolidWorks to design and analyze internal and external forces on the injection device using finite element analysis.
 - Utilizing ANSYS Fluent to manipulate system model fluid flow and predict velocity and pressure changes throughout the system for all scenarios.
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SKILLS

- **CAD, FEA, and CFD Tools:** SolidWorks, STAR-CCM+, ANSYS, and Microstation
- **Coding Languages:** MATLAB, LabVIEW, and Python
- **Manufacturing:** Lathe, Mill, Bandsaw, Metal Fabrication Methods, and 3D Printing Methods
- **Other Skills:** Product Development, Project Management, Data Acquisition and Analysis, Financial Analysis, Technical Writing, Geometric Dimensioning & Tolerancing (GD&T)