REJIN ADHIKARI

Revere, MA • (972) 533-6597 • adhikarirejin7@gmail.com

EDUCATION

Northeastern University
Boston, MA · In progress
MS, Engineering Management
Coursework: Engineering Project Management, Deterministic Operations Research

University of Texas at Arlington
Arlington, TX · May 2023
BS, Mechanical Engineering
Honors Student · Mavericks Academic Scholar · Global 3rd Place, ASHRAE Student Design Competition · UTA Innovation Day Presenter

TECHNICAL SKILLS

CAD & Simulation
SolidWorks, ANSYS Workbench, AutoCAD, Autodesk Inventor, MATLAB, Python, C, Java, GD&T, FEA, Energy Modeling, Technical Writing

Methods
Operations Research, Optimization Modeling, Digital Twins, Engineering Project Management

Operations
Multi-Unit Operations, P&L Management, Supply Chain and Vendor Negotiation, Payroll, Budgeting

LANGUAGES

- English (Fluent)
- Nepali (Native)
- Hindi (Fluent)
- Urdu (Proficient)

LEADERSHIP

- **SI Leader, Thermodynamics**: mentored engineering students (Fall 2020)
- **Senator**, UTA Student Government (2020-2021)
- **Executive Board**, Nepalese Student Association (2020)

PROFESSIONAL SUMMARY

Mechanical engineer and M.S. in Engineering Management candidate at Northeastern University. Senior design team placed 3rd globally in the ASHRAE Student Design Competition (HVAC Design Calculations), and undergraduate research experience in finite element modeling and digital twins. Owner and operator of a 10-store retail portfolio in the Dallas-Fort Worth area generating about $9M in annual revenue, with experience in operations management, project delivery, budgeting, and vendor negotiation.

PROFESSIONAL EXPERIENCE

Owner & Operations Manager, Multi-Unit Retail Enterprise (10 Stores)
2021 - Present

- **Multi-Unit Leadership:** Direct operational strategy, vendor relationships, and logistics across 10 retail locations in the Dallas-Fort Worth area, generating about $750K in monthly sales, over $9M in annual gross revenue.
- **Team Management:** Supervise store managers and staff across locations; introduced standardized scheduling and performance evaluation practices.
- **Financial Oversight:** Manage payroll, expense forecasts, store budgets, P&L reporting, and tax compliance for the portfolio.
- **Procurement:** Negotiate contracts and pricing terms with regional distributors to improve inventory margins and reduce stock shortages.

Research Assistant, UTA Research Institute, Dr. Xin Liu's Lab
Dec 2020 - Aug 2021

- **FE Modeling & Digital Twins:** Created finite element models and digital twins to study microstructure behavior using Mechanics of Structure Genome (MSG) modeling.
- **Publication:** Published and presented results at UTA Innovation Day 2021.

ENGINEERING PROJECTS & RESEARCH

Mav A/C, ASHRAE Student Design Competition (3rd Place Worldwide)
Spring 2023

- Designed an HVAC system for a laboratory building in Cairo, Egypt, aligned with ASHRAE standards and cost efficiency.
- Performed load calculations, energy modeling, and utility cost analysis. Placed 3rd globally in the HVAC Design Calculations category.

Technical Design & FEA Project Portfolio, UT Arlington

- **Thermal Cycling of BGA Package:** Modeled a BGA package in SolidWorks and simulated thermal and force effects in ANSYS Workbench; analyzed PCB reliability through coefficient of thermal expansion (CTE) variation studies.
- **Disk Brake & Gearbox:** Built SolidWorks models and ran structural and dynamic simulations in ANSYS to evaluate stress and deformation; designed a gear reduction and applied GD&T in 2D component drawings.
- **Single Cylinder Engine & Heat Sink:** Reverse engineered engine components and validated a heat sink model for effective cooling using simulations.