

(M): +1-(682)-553-6018  
914 Greek Row Drive, Apartment #138, Arlington, TX, 76013

**Kunal A. Shah**

E-mail: kunalashah@mavs.uta.edu  
<https://www.linkedin.com/in/kunal90>

---

## **CAREER SUMMARY:**

An enthusiastic and a result driven engineer seeking an internship/job opportunity. I want to develop innovative and revolutionary products by utilizing my technical and interpersonal skills. A Graduate Research Assistant with background in patent office, connected cars, racecar engineering, plant design, transformers manufacturing, petroleum industry, marketing and technology analysis.

---

## **SKILL SET:**

Soft Skills: Multi-tasking, Self-starter, Decision maker, Team leader, Adaptable.

Analysis and Modeling Tools: ANSYS, CFD, Solid Works, CATIA V5, Pro-E, AutoCAD + GD&T.

Coding Tools: MATLAB, C.

Marketing / Technology Analysis Tools: Data.com, Mail Chimp, Hoovers, Foresight, Pat Snap, Visio.

Project Management Tools: MS Project, SharePoint, Sophia.

---

## **EDUCATION:**

**University of Texas at Arlington (UTA)** – M. S. in Mechanical Engineering. (GPA: 3.7/4) Expected May'16

Courses: Finite Element Analysis, Automotive, Elect. Packaging, Thermodynamics, Fluid Dynamics.

**Gujarat Technological University** – B. E. in in Mechanical Engineering. May'12

---

## **WORK EXPERIENCE**

**Research Administration, U. T. Arlington:** It's the tech-transfer office of the university. The link between university's patents and industry partners.

### **Graduate Research Assistant**

Jan '15 – Present

Responsibilities: Conduct exhaustive novelty assessment, technological comparisons and marketing activities of new technologies developed at UTA and UTARI. Liaison with inventors, market experts and prospective industrial clients to permeate the technology in market. Technology domains include mechanical, aerospace, electrical, robotics, controls systems, material science and bio-mechanical.

**Prakash Chemicals Pvt. Ltd.:** Chemical trading and manufacturing company.

### **Associate Business Development Manager – Technical**

Mar '14 – Jul '14

Engineering polymers division- PEEK, PFA, PPA, PVDF.

Responsibilities: Liaison with Solvay, analyze the polymer's technical portfolios and match its application within engineering products like automobiles, pumps, valves and compressors. Conduct market analysis and lead the campaigns. Assist the manufacturers in design and manufacturing process, develop marketing and technical teams to improve clientele base among tier 1 and tier 2 manufactures of industry.

Achievements: Exhaustive analysis of market requirements and technical application areas was conducted.

**Ghafari Associates:** One of the top 100 Construction design firms. MEPF consultants.

### **Mechanical Engineer – Design**

Nov '12 – Feb '14

**Project:** Ford Engine Plant – Process Utilities – Sanand, India.

Responsibilities: Understand the machine utility requirement and furnishing the design for power, chilled water, compressed air, R.O. water, industrial waste rejection and machine exhaust through roof. Analyze machine data sheet, plan project, check drawings, prepare BOM and MOM, liaison with clients, and restrict revisions. During the training period basic design of green buildings, HVAC systems, utility piping, etc. was understood.

Achievements: Excellent documentation, revision restriction and meeting conduction techniques implemented for this mega scale multidisciplinary project.

---

## INTERNSHIP

**Bosch Automotive Aftermarket Solutions:** Leading global automotive parts supplier.

**Test Engineer, Strategic Marketing Intern - Connected Vehicles**

Jun '15 – Aug'15

Responsibilities: Researched papers in area of telematics, internet of things, connected cars; conduct in-depth market analysis; Participate in status meets, strategy sessions and product development discussions in this startup environment. Test run vehicle based mobile apps and prepare bug reports. Brainstorm the solutions for existing errors. Provide solutions to the code developers.

Achievement: Coached a team of 10 in Detroit facility for testing operations and did cost savings for market research.

**Avani Petrochem Pvt. Ltd:** Distillation facility for specialty industrial oil.

Mar'14

Piping system design and distillation tower setup for petroleum product distillation was understood. Overview of design considerations, laboratory setup, production setup, cost cutting techniques, for a small medium scale industry was understood.

Achievement: Methods to cut cooling tower's operational costs were analyzed. Closed loop cooling system was proposed to cut down chemical treatment costs for feed water and effluent treatment cost.

**Voltamp Transformers Ltd:** Transformer designing, manufacturing and testing company.

Oct'12

Short term training was undertaken in design, production, quality control and testing departments of the power transformer. Understood the synergies existing between various departments, and got a basic know-how of Oil-filled Power Transformers, high and low voltage circuits and usage of testing equipments.

---

## PROJECT

**Flow Control Valve Design:** A project to design an innovative flow control device which has the capabilities to do dynamic cooling of multi-core electronic chips. The resultant device increases the reliability, decreases component complexity and increases the efficiency of Data centers. A multi physics project based on material science, fluid, thermal and structure behavior based on CFD.

Ongoing

**Formula S.A.E. – UTA Racing:** Developed cooling system architecture for weight reduction and increased heat transfer, optimization of drawings for machining and learning aerodynamic optimization techniques.

Project based on AutoCAD, SolidWorks, Point wise, CFD-CFX, ANSYS.

Ongoing

Achievement: 5 pounds weight reduction in cooling system, 25% reduction in material wastage.

**Kinematic and Dynamic Analysis of 2 Degree Of Freedom Robotic Arm:** A project based on Newton-Euler and Lagrangian formulation solved through Pro-E and MATLAB.

Jan '12

**Hydraulic Launch Assist System:** Analysis of hydraulic Regenerative braking system's reservoir. A project based on CFD and MATLAB.

Aug '11

Achievements: A proposed design concept to mount reservoir at an angle with corrugated aluminum exteriors.

**Formula S.A.E. – ADIT, India:** To design, fabricate, test and race a formula type race car.

Head for Steering system, cooling system and cockpit ergonomics.

Jul '10

Responsibilities: 1) To develop a steering linkage system which reduces the steering ratio and turning radius.

2) To estimate the cooling system requirements and fabrication considerations.

3) To design the steering, gas, brake, clutch and gear controls considering ergonomics and egress time.

Achievements: 1) A novel, cost effective \$2 detachable steering system was incorporated.

2) A record egress time of 3.5 - 4 seconds was achieved.

---