

AEROSTAR SOLUTIONS

A Project Association

*AERONAUTICAL AND MECHANICAL PROJECTS
FOR
FINAL YEAR STUDENTS*

We had started our project center for the students who are seems too weak in subjects, lack of sources, those who want to concentrate on gate or in their semester subjects and lack of knowledge in advanced technologies.

Our AEROSTAR SOLUTIONS is a public service center to the final year students especially for aeronautical engineering and mechanical engineering students. The final year projects are a **mirror** of a **student academic performance**. The project reflects the candidate's **capability** in their field.

ABOUT OUR ORGANISATION

Our organization was started as a student project center since 2009 by final year students along with the help of industrial research professionals working in usa based research industry. Initially we started this project center for only aeronautical engineering students. Later we had extended our field to mechanical engineering. Not only final year projects we also arranged **industrial project, mini projects, workshops on CFD and FEA, in plant training** for academic students. Our project centers are in major cities like Chennai, Pune, Mumbai and Bangalore. We have trained research analyst and academic professionals working in various research departments

OUR MOTTO

Among the nations our country has the maximum percentage of students. The talented student power will lead our country to a super power as our youth leader **A.P.J. ABDUL KALAM**. Our main aim is to make the outcome engineering students has talented and skilled in advanced technologies and to increase their innovative thinking power. And to help the poor people to achieve esteem level. Learning the books as per university syllabus will not lead to successful engineer. Beyond that the **analyzing skill, problem solving skill** will speaks in our career growth. Those factors are being developed among the engineering students.

AERO PROJECTS TITLES

CFD PROJECTS

- OPTIMIZATION IN MICROAERIAL VEHICLE DESIGN FOR HIGHER PERFORMANCE.
- INTERNAL FLOW ANALYSIS IN A JET ENGINE FOR VARIOUS AOA OF AN AIRCRAFT.
- COMPRESSOR DESIGN OPTIMIZATION FOR A HIGH SPEED JET ENGINE.
- OPTIMIZATION IN WING DESIGN FOR FIGHTER AND PASSENGER AIRCRAFT.
- REDUCTION OF DRAG IN A BUGGY CAR MODEL.
- DESIGN AND OPTIMIZATION OF FLOW FIELD IN HEAT EXCHANGER.
- DESIGN AND ANALYSIS OF DUST COLLECTOR USING CFD.
- ADVANCED DESIGN FOR A TAIL WING FOR BETTER PERFORMANCE.
- DESIGN AND OPTIMIZATION IN AUTOMOTIVE CABIN COOLING.
- REDUCTION OF NOX IN CATALYTIC CONVERTER.
- AIR AND FUEL FLOW INTERACTION IN COMBUSTION CHAMBER FOR VARIOUS INJECTOR LOCATIONS.
- NOZZLE DESIGN OPTIMIZATION FOR TO REDUCE NOISE FOR TURBO JET ENGINE.

FEA PROJECTS

- ESTIMATION OF HEAT EXCHANGER PERFORMANCE.
- THERMAL AND STRUCTURAL ANALYSIS FOR TURBINE ENGINE BLADES AT MAXIMUM TEMPERATURE.
- OPTIMIZATION IN PISTON DESIGN FOR HIGH SPEED PISTON ENGINE.
- OPTIMIZATION IN FUSELAGE DESIGN FOR STRESSES CAUSED DUE TO WING AT VARIOUS LOAD CONDITIONS.
- LANDING GEAR STRESS ANALYSIS DURING ROUGH LANDING.
- STRESS ANALYSIS OVER A COMPRESSOR DUE TO EXTERNAL BIRD HIT.
- VIBRATIONAL ANALYSIS OF AN WING DURING CRUISE SPEED.
- STATIC AND DYNAMIC ANALYSIS FOR A TURBO PROPELLER ENGINE AND ITS OPTIMIZATION
- STATIC AND DYNAMIC ANALYSIS FOR A SWEPT BACK, DIHEDRAL WING AND ITS OPTIMIZATION.
- THERMAL AND IMPACT LOAD ANALYSIS OVER AN RE ENTRY VEHICLE.

FLUID STRUCTURE INTERACTION

- STRESS DISTRIBUTION OVER A RE ENTRY VEHICLE DUE TO HYPERSONIC SPEED.
- STRUCTURAL ANALYSIS OVER AN AIRCRAFT DUE TO AERODYNAMIC FORCES.
- STRUCTURAL DEFORMATION OF A COMBUSTION CHAMBER DUE TO HIGH TEMPERATURE COMBUSTION GAS AND INFLUENCE OF BYPASS RAM AIR.
- FLUTTER ANALYSING OVER AN AIRCRAFT WING DURING CRUISE SPEED.

HYPOTHETICAL PROJECTS

- LOW COST DIRECTIONAL STABILIZER FOR AN AIRCRAFT
- SOLAR POWER TRANSMISSION WITHOUT MEDIUM
- DIRECT TURBINE GAS TEMPERATURE PREDICTION USING ADVANCED THERMOCOUPLE DESIGN.
- AUTOMATION IN LANDING SYSTEM.
- INVISIBLE STEALTH AIRCRAFT WITHOUT CONSIDERING AERODYNAMICS.
- STEALTH AIRCRAFT DESIGN USING ADVANCED COMPOSITE COMPOSITIONS.
- AUTOMATIC CRACK DETECTION AND SELF HEALING IN AN AIRCRAFT STRUCTURES.
- TORQUEMETER DESIGN FOR A TURBO PROP ENGINE USING PIEZO ELECTRIC EFFECT.

MECHANICAL PROJECTS TITLES

FEA PROJECTS

1. OPTIMIZATION IN PISTON DESIGN FOR HIGH SPEED ENGINES.
2. PRE MANUFACTURING DESIGN ANALYSIS FOR A CRANK SHAFT-CONNECTING ROD ASSEMBLY FOR VARIABLE LOAD CASES USING FEA.
3. FORCE TRANSMISSION ANALYSIS IN CONNECTING ROD ASSEMBLY FOR HIGHER EFFICIENCY ENGINES.
4. OPTIMIZED MUFFLER DESIGN FOR LESS POLLUTION ENGINES
5. AUTOMOBILE MUFFLER DESIGN OPTIMIZATION FOR LESS NOISE ENGINES.
6. THERMAL DEFORMATIONS OF BOLTS IN BOILER DESIGN FOR VARIOUS LOAD CONDITIONS.
7. RELIABILITY PREDICTION OF A GEARS IN G-ROTORS PUMPS.
8. ADVANCED ANALYSIS IN WHEEL HUB DESIGN FOR HEAVY DUTY VEHICLES.
9. VIBRATIONAL ANALYSIS OVER AN ENGINE MOUNT DURING HEAVY DUTY TRANSPORT.
10. TRANSIENT THERMAL AND STATIC STRUCTURAL ANALYSIS IN VARIOUS FIN DESIGNS

CFD PROJECTS

1. DESIGN AND OPTIMIZATION OF TURN DISH APPARATUS.
2. REDUCTION OF DRAG IN BUGGY CAR MODEL.
3. DESIGN AND OPTIMIZATION OF FLOW FIELD IN MUFFLER.
4. ADVANCED FIN DESIGN FOR HIGH SPEED ENGINES.
5. ADVANCED WIND MILL TOWER DESIGN FOR ENVIRONMENTAL LOADS AT VARIOUS CONDITIONS.
6. REDUCTION OF NOX IN CATALYTIC CONVERTOR USING CFD.
7. AUTOMOTIVE CABIN DESIGN FOR EFFECTIVE COOLING USING CFD.
8. DESIGN AND OPTIMIZATION OF CYCLON SEPARATOR.
9. AERODYNAMIC DRAG ANALYSIS OVER A SPORTS VEHICLE DUE TO GUST LOADS.
10. COLD FLOW ANALYSIS IN ENGINE CYLINDERS.
11. INCREASING THE ENGINE CYLINDER LIFE BY A THERMAL OPTIMIZATION TOOL.

HYPOTHETICAL PROJECTS

1. SYNTHESIS AND CONSOLIDATION OF NANO – CRYSTALLINE MATERIALS.
2. CONTROLLING THE SHELL CRACK REJECTION IN SHELL MOLDING PROCESS.
3. SOLAR POWER TRANSMISSION WITHOUT MEDIUM.

Not only had the projects listed above also we offered various type of projects in aeronautical and mechanical engineering branch. We also offer free consulting for final year projects, mini projects and design projects. The projects are offered at reasonable price. The only thing the students should do.

JUST CONTACT US!!!

CONTACT DETAILS

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2. R. MANIGANDAN

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TERMS AND CONDITIONS

1. ONCE THE PROJECT AS BEEN CONFIRMED IT CAN'T BE CHANGED.
2. BECAUSE EVERY PROJECT IS KEPT UNDER PRIVACY.
3. AMOUNT ONCE PAID IS NON-REFUNDABLE.
4. DURATION OF THE PROJECT IS BASED ON THE PROJECT STUDENT SELECTED.