Design Portfolio

Abhijeet.B.R/ Design Engineer

Overdrive magazine

Career line

Thanks for doing a fantastic job, from a true blue automobile enthusiast. I really like most of the stories about motorsport, new launches etc. Hats off to your entire team! I am also an auto enthusiast, in the 12th standard, looking forward to a career in automobiles. To be frank, we are a confused lot and look forward to a lot of useful inputs on the career front, future avenues, out-of-the-box ideas on concepts and something practical. We need guidance with reference to tools, body shop, trends and artwork with reference to painting, engine mods, suspension mods etc. We look forward to more coverage on these aspects including best colleges in automobile engineering and courses available. I feel this will definitely go a long way to promote a healthy culture for auto enthusiasts like me. Hope you publish this letter along with the design done by me which I do in my free time.

ABHIJEET B.R

Thanks for writing to us, Abhijeet. There are so many career options that revolve around automobiles. And most of them do not even need an engineering degree. We will look into doing a story on possible careers in this line very soon. All the best!

Car-maker in the making

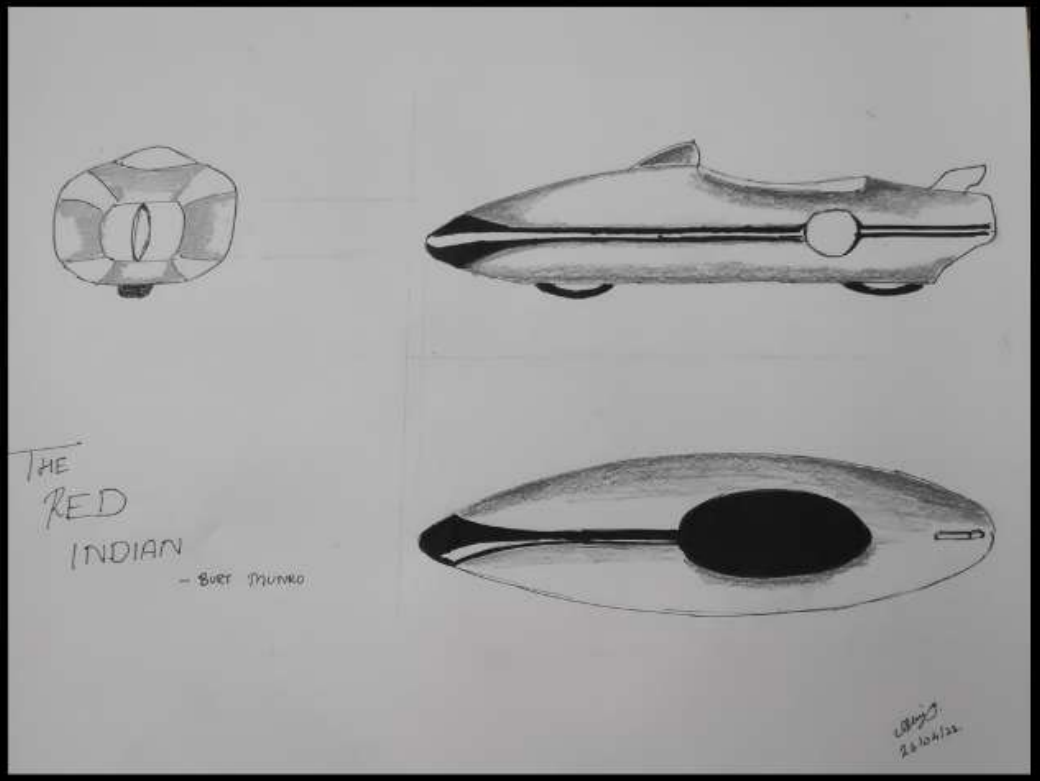
I am really crazy about automobiles! I think I love cars more than my girlfriend! Sorry girl, I am addicted. I want to be an automobile designer, and my dreams are lofty. I also want to own an automobile company. I have already designed its logo and name, i.e. SMG with a the tag line which says, "Stay away from the herd". I wish you'll be there at the day of success in my life. Please be available to take my

My work featured in Overdrive Magazine, where I ask about Career path to pursue my dream Profession as a Designer.
I have been featured by a few Magazines like AutoCar India, Deccan Herald, etc, but sadly could'nt get a hold of the documentations.

SAE

Competed in SAE Mega ATV Championship in 2019 held at Goa.
We built an All terrain Vehicle with a standardised Lawn Mover Engine provided to us by the jury of the competetion as a rule.
The fabrication of parts was mostly in-house but some parts had to be done by us at a bus body building yard as our college lacked the necessary Welding Equipment and floor space required for Tube bending and so on. The suspension coils were designed by me and my senior using solidworks with all the necessary analysis and constraints kept in mind. We even applied for a design patent for the suspension.

Indian



This design mainly was made to adore the simplicity of Burt Munroes Indian which held it's own during the salt flats Runs he made at the age of 68 on an old triumph with minimal modifications to the structure, and primary focus towards the Aerodyanamic fairing which clothed his Indian. Simple reverse Aerofoil Structure made of Fibre Glass and a hand built engine, is an inspiration to all of the designers out there.

This Design can be a statement for the future of MInimal Design theory of Automobiles.

Disclaimer: I am kind of an old school traditional guy when it comes to design, I like to do everything in hard copies, but I love to learn about the new age tech and arm myself with new age tech and hope to learn more about it at NID.

New Age E.V's

New Age design for E-V bikes based on a hybrid of the Indian manufacturers Flagship Bike, TVS Apache RR310 and the Triumph Tiger Sport 660. The design statement being, " To stand apart from the rest of the Bunch." Road presence and Aerodynamics in a single package is a hard come by, in the present Scenario of EV Vehicle Markets.

Li-ion batter in turn decrease overall weight of the bike and with a composite belt drive, this can help achieve insane power to weight ratios, suited for track use too. The rotating mass elements like wheels and brake discs can be made much lighter in turn increasing the handling capabilities of the machine.

Some Noteworthy features includes Long Range of 300km+ achievable by Advanced Li-Ion Batteries with small packaging and Durable Reusable ones. Portable Batteries come in handy during long ride situations.

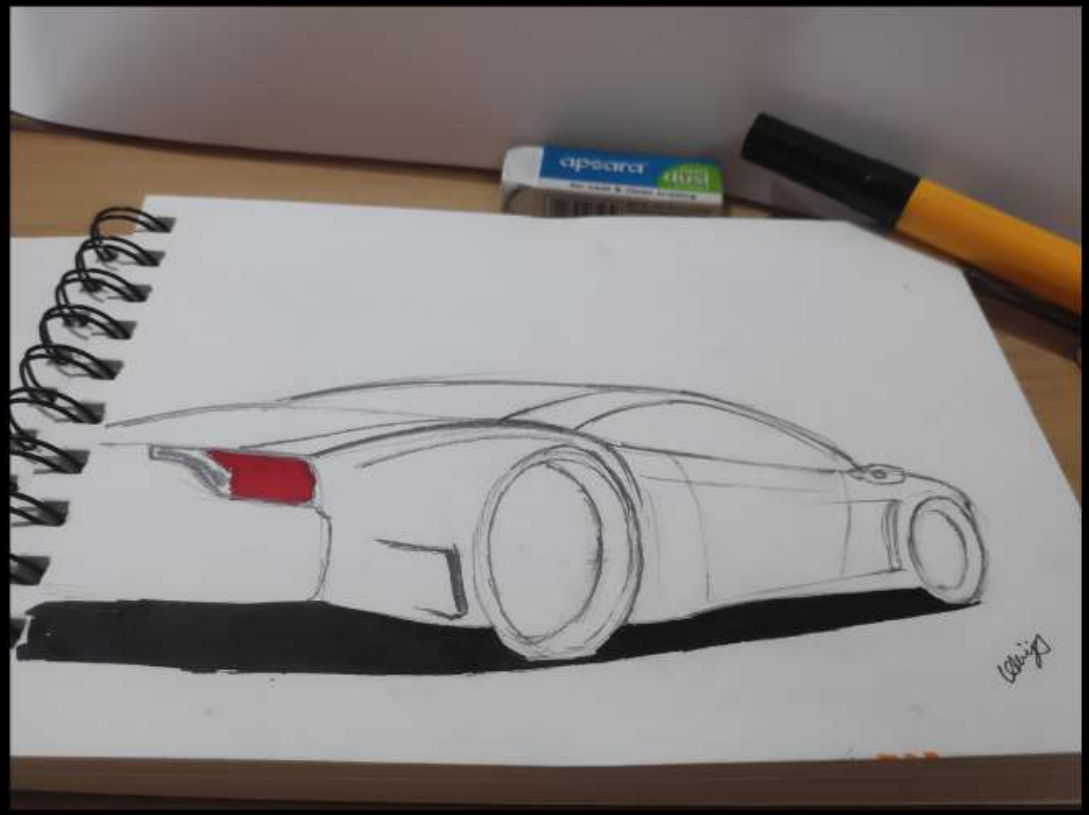
G.T into an E.V

A minimalist Design of a crossover Sports Grand Tourer with the lines of a Porsche and the Design of an Alfa. As mentioned in the Heading, YES, this is also an E-V since the Fossil Fuels are running out and an issue of Global Warming is growing among the Humans.
This car has not been coloured for a reason and here's why !

The paint is a Solar paint, meaning the paint which adheres to the surface/ body of the vehicle can generate Electricity. Thus range is infinite but not on Cloudy Days, but on warm Sunny days, the Perfect G.T

My take on a G.T is it must have a long Range, Good Enough Grunt and Luxurious enough for you and your soulmate to travel in, with ample Boot Space.

And this adheres to each and every single one of them.



The Solar Paint is the next Big Breakthrough expected to be seen in the near future, as of now it is being tested out by a team of researchers from MIT. If implemented, this method might increase overall mechanical efficiency of the current electric vehicle and inturn increase in demand.

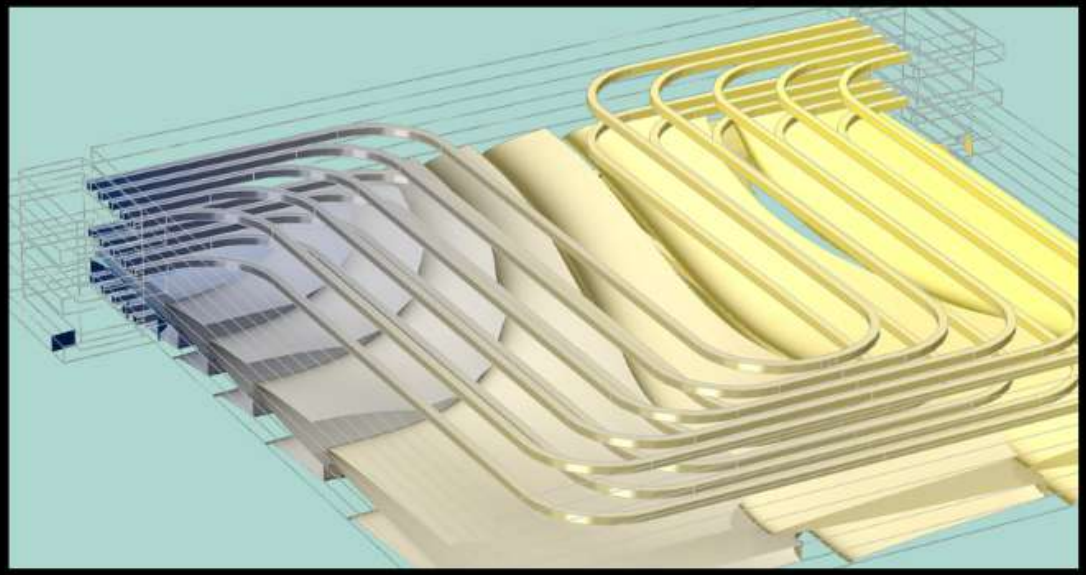
Liquid Cooling in EV's

A major Flaw/ Problem being faced now by the current Automobile Manufacturers in the World is not range, not top speed, but ways to keep your battery cool.
Several Incidents in the recent days have proved that battery temperature management in smaller vehicles is a bit of a challenge.

It can be controlled by proper Engineering and coolant viscosities.
One of the best ways is to implement a thermal jacket, like that of liquid cooled engines with a recirculating mechanism.

Other ways include using thermal paste technologies like the technology used in smartphones to keep processors cool.

The pictures on the side indicate the implementations of Liquid cooling in Batteries, the best being radiator type as it is easily implementable in Modern EV's due to it's compact size.



Professional Expertise

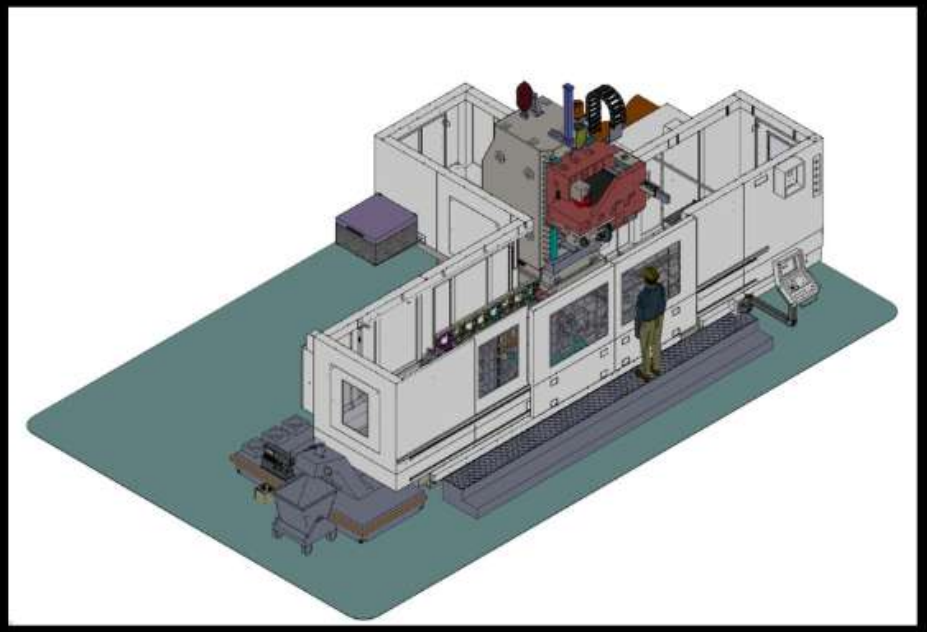
Currently, I am a Design Engineer by profession, I design Special Purpose Machines (customer centric CNC Machines) for specific Component Machining. Our Customers are mostly leading Automobile manufacturing companies.
I specialize in Heavy Structures and Complex Stress Bearing Units.

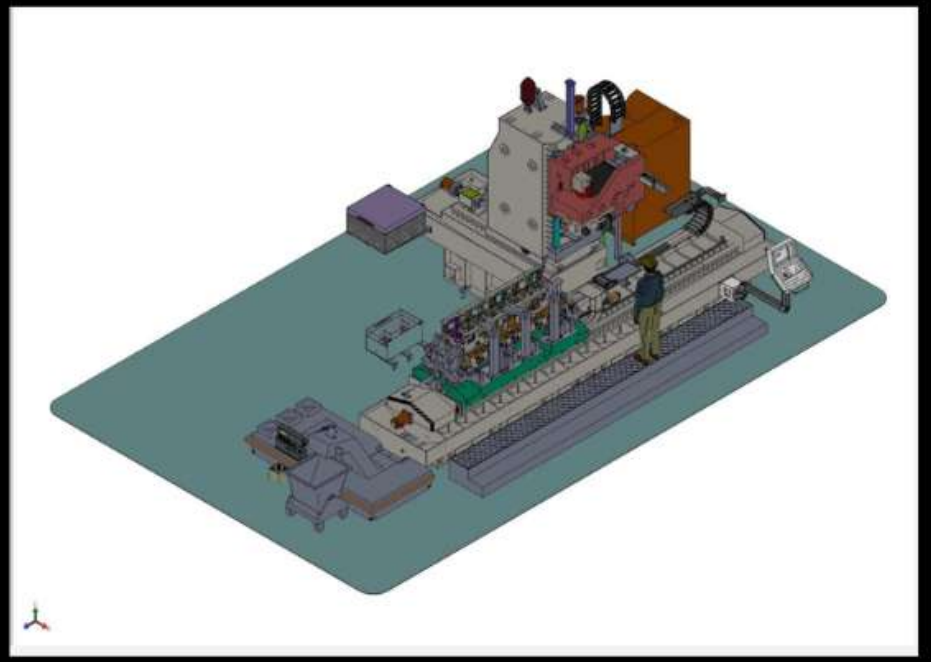
I have been involved with quite a few challenging machines and here are some projects which, I can share and be proud of.

Here is one such Machine while it was being sent to the customer, in Madras and ever since then it has been running successfully.

Professional Expertise

This was my Biggest project till date. This machine is a Big Block Cummins Engine Machining Center. The component is a Big Block V16 engine with a cubic capacity of 65,000 cc's. Mainly used in Marine Engines and the World's Largest Mine Trucks

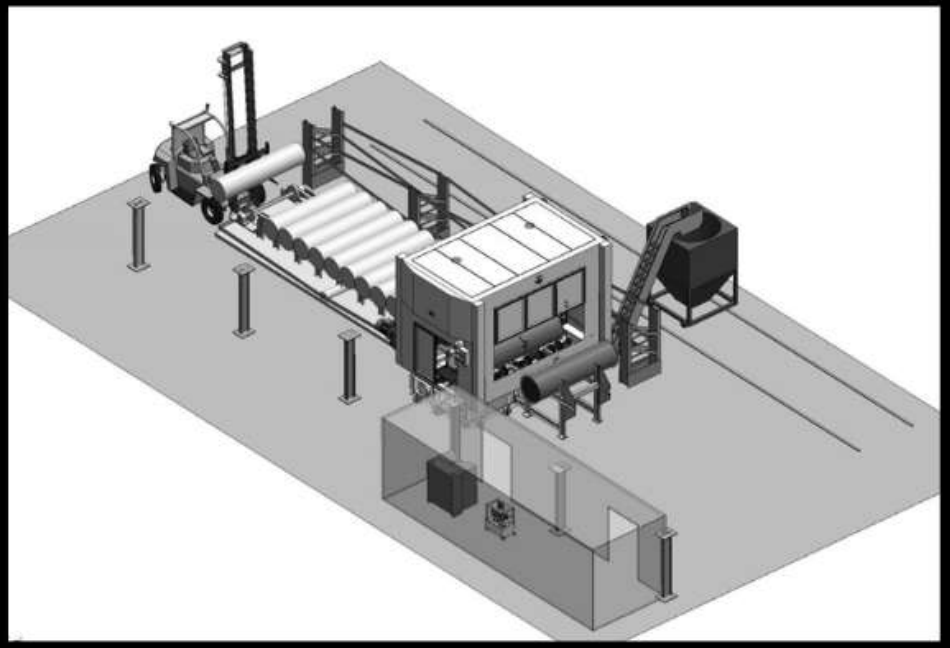


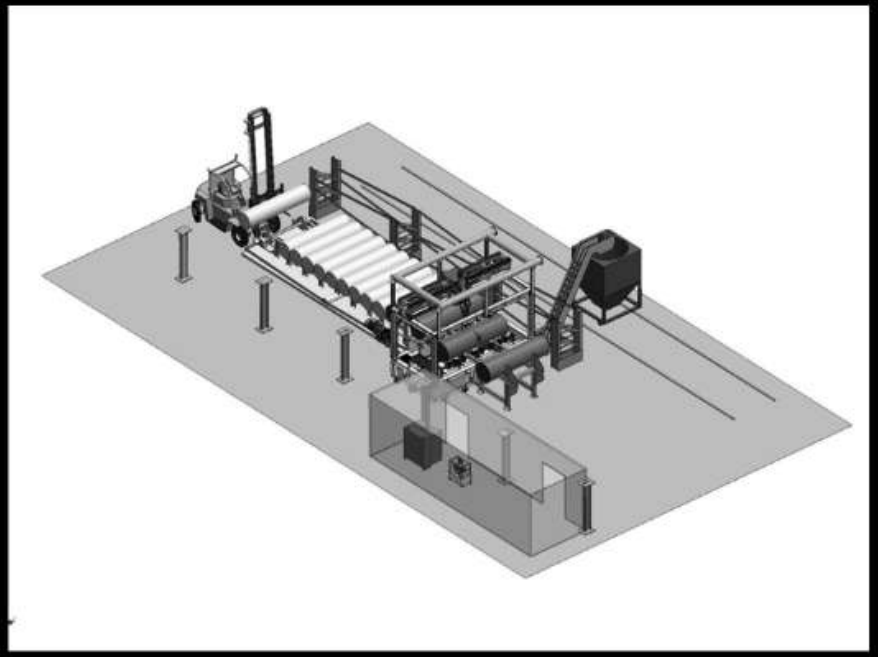


These photos indicate the size perspective of a normal Human who is about 5foot 10 inches in comparison with the machine. The above photo has no sheet metal encasing while the left finished one has one. This is to ensure the safety of the operator as well as to prevent the coolant from splashing all over the factory.

Professional Expertise

This is my current project, a Graphite electrode Machining Center. To put things into perspective the machine is as big as a small two bedroom house.





The machined Graphite is used in Nuclear Reactors and Steel Foundries wherein graphite is used in the furnaces to attain High Temperatures.

These projects have helped me to understand the importance of structural designs, Impact loads, and so on. These can be implemented in automobile design where we can create aesthetically good vehicles with better structural integrity and crash protection.

My Art

John Wick's
Mustang

My Art

A Red Bugatti
Chiron Super Sport
300+

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↳ Hope to meet you all soon.