

Annual SAE Report **(2017-2018)**

Redshift Racing India:

Name of the organization/chapter/project: Redshift Racing India

List of Members/Details of Committee- 2017-2018

No.	Name	Dept	Year	Nature of Work
1	Yash Bhatt	Mech	BE	Designing
2	Aditya Purohit	Mech	BE	Accounts & Marketing
3	Chaitanya Sheth	Mech	BE	Accounts & Marketing
4	Gopesh Chilveri	Mech	BE	Designing
5	Amit Petare	Mech	BE	Manufacturing
6	Yash Nadagire	Mech	BE	Designing
7	Ashish Maurya	Mech	BE	Designing
8	Shithija Shetty	Mech	BE	Designing
9	Mihir Patil	Mech	BE	Manufacturing
10	Rahul Sawant	Mech	BE	Designing
11	Pranav Kunte	Mech	BE	Manufacturing
12	Parth Shah	Mech	TE	Designing
13	Akash Anghan	Mech	TE	Inventory
14	Viral Chheda	Mech	TE	Designing
15	Varun Bhanarkar	Mech	TE	Inventory
16	Richie Mathew	Mech	TE	Testing
17	Rohith Augustine	Mech	TE	Inventory
18	Rushabh Vora	Mech	TE	Manufacturing
19	Erwin Vadukut	Mech	TE	Testing
20	Sumukh Dedhia	Mech	TE	Purchasing
21	Ali Arsiwala	Mech	TE	Designing
22	Ahmed Khalifa	Mech	TE	Marketing
23	Husain Fidvi	Mech	TE	Manufacturing
24	Chetan Rane	Mech	TE	Purchasing
25	Vasu Vara	Mech	TE	Manufacturing
26	Akshat Shah	Mech	TE	Testing
27	Nijanand Sarawate	Mech	TE	Designing
28	Yash dalal	Mech	TE	Manufacturing

Photo of members/committee – 2017-2018



Redshift Racing India Team - 2017-18

Details of events/activities held during academic year 2017-2018

Sr. No. of Event / Activity	Day/Date	Year	Month	Time	Venue	Description of Activity
1.	25-28 January	2018	January	--	Indore	Competition: BAJA SAE 2018 Participation in BAJA SAE 2018. The competition was held at Indore. National level competition with over 150 teams from INDIA .
2.	30th May to 2nd June	2018	June	--	Oregon	Competition: BAJA SAE USA 2018. International competition with best 100 global teams competing at USA

Reports of event/activity

Sr. No. of Event / Activity	Day/Date	Year	Month	Time	Venue	Description of Activity
1.	25-28 January	2018	January	--	Indore	Competition: BAJA SAE 2018 Participation in BAJA SAE 2018. The competition was held at Indore.National level competition with over 150 teams from INDIA .

Details of participation in the event/activity

No of students / faculty	COMP	ETRX	EXTC	IT	MECH	Total no of participants
FY						30
SY						
TY						
LY						

Report of event/activity

Competition: BAJA SAE INDORE 2018

The BAJA SAE INDIA 2018 held in Pithampur, Indore was a great learning experience for the team.

The competition started on 25th January with Technical Inspection and Engine check events lined up on the Day 1. The team cleared the Tech Inspection, Engine check and safety scrutiny on the first day itself. Simultaneously the Sales event and cost evaluation events took place. The team performed fairly well in both the events bagging the fourth place in sales event with a score of 47.5 points out of 50(4th out of 125 teams).

Day 2 started with the design evaluation and brake test. The judges appreciated our design and gave their valuable inputs as to what could be improved further. We scored 107 points out of 150 in the design evaluation.

This year we had designed and manufactured our own brake caliper(First team to manufacture and design its own brake calliper) . We faced some problems with the brakes and it took us a lot of time to identify and solve it. The time loss meant we couldn't attempt all the dynamic events which put us on the backfoot.

On the final day Day 4, we had the gruelling 4 hour endurance race. We started the race on a good note with our drivers catching up with the other teams. Just when we thought we were recovering, our Engine got choked due to mud getting inside the air filter and we had to open up the engine to clean it. This halted our progress and took a lot of time to get the engine race ready. Our CVT was also not in the best

of conditions and this degraded our performance. The positive thing was that we did not face any failures in the parts designed by us.

Conclusion

The competition was a very good learning experience. It allowed the team members to interact with industrial experts and members of the other teams. We got several design suggestions and the team is now confident and prepared to present at the next competition –BAJA SAE USA .

Details of prizes/accolades

Sr. No.	Name of the student	Department	Details of prize won	Remarks
1	RedshiftRacing India Team - 2017- 18	MECH	<ul style="list-style-type: none">● 1st Team to clear the Technical Inspection out of 165 teams● 4th in Business Plan Presentation	

Sample Photographs of the Event/Activity



K. J. Somaiya College of Engineering, Mumbai-77

(Autonomous College Affiliated to University of Mumbai)

Sr. No. of Event / Activity	Day/Date	Year	Month	Time	Venue	Description of Activity
2	30th May to 2nd June	2018	June	--	Oregon	Competition: BAJA SAE USA 2018. International competition with best 100global teams competing at Rochester , New York, USA

Details of participation in the event/activity

No of students / faculty	COMP	ETRX	EXTC	IT	MECH	Total no of participants
FY						30
SY						
TY						
LY						
No of Faculty						

Report of event/activity**Competition: BAJA SAE Oregon 2018.****Overview**

Redshift Racing India participated in the recently concluded **BAJA SAE Oregon 2018**. The competition was held at **USA**. Total of thirty plus students contributed to the preparations for the competition, while eleven students went for the competition. The competition concluded with Redshift Racing India being the best designed Indian cars in the event and 6th in business plan .

Competition (30th May to 2nd June 2018)

Team RedShift Racing India participated in BAJA SAE Oregon competition held in Oregon . DAY 1 started with engine check and business plan was presented . Set in the Pune industrial area a concrete plant layout was presented along with the details . Further with more efforts by the team a new ATV with much better design and new CVT was manufactured and rigorously tested and was all set to be shipped on 13th May 2018 The team once again brought fore as it did pretty well in Sales and Cost Evaluation. Track being tough compared to INDIA ,the vehicle was thoroughly tested .The team had an average day for the Endurance run,starting with 40th position steadily going up to 21st position the team had a collision and it took some time to get back on track. The loss of momentum affected the ultimate results and we finished the endurance run with 42nd position

Conclusion

The competition was a very good learning experience. It allowed the team members to interact with industrial experts and members of the other international teams. We got several design suggestions for our car and learnt a lot of things regarding the sustainability and Vehicle dynamics of the vehicle .

Details of Achievements

Sr. No.	Name of the student	Department	Details of prize won	Remarks
1	Redshift Racing India Team - 2017- 18	MECH (ALL)	<ul style="list-style-type: none">● 3rd Place – Overall ranking in India● 8th Place – Cost Evaluation● 6th Place – Business Plan Presentation	

Sample Photographs of the Event/Activity



Team Onyx India:

Name of the organization/chapter/project: Team Onyx India

List of Members/Details of Committee- 2017-2018

Sr. No.	Name of the Faculty advisor/ in-charge	Department	Portfolio
1	Professor Prashant Jain	Mechanical	Adviser

Sr. No.	Name of Student	Department	Portfolio
1.	SamruddhaGawande	Mechanical	Captain
2.	Vishal Thakkar	Mechanical	Marketing Lead
3.	ParthGabani	Mechanical	Aerodynamics Lead
4.	BurhanuddinBhavnagarwala	Mechanical	Structural Lead
5.	MayurNandu	EXTC	Propulsion Lead
6.	AdhirajPimpalkar	Mechanical	Manufacturing Lead
7.	DhaneshPamnani	Mechanical	Aerodynamics
8.	TusharPatil	Mechanical	Aerodynamics
9.	Prathamesh Chine	Mechanical	Aerodynamics
10.	Arpit Shah	Mechanical	Structures
11.	PunitBhanushali	Mechanical	Structures
12.	SaurabhShetake	Mechanical	Structures
13.	RasikaJadhav	Mechanical	Manufacturing
14.	Nadeem Noor Mohammed	Mechanical	Manufacturing
15.	Raj Mandal	Mechanical	Manufacturing
16.	AkshayBhanushali	Mechanical	Propulsion
17.	SangramHande	Mechanical	Propulsion
18.	DevarshRawal	Mechanical	Propulsion

Photo of members/committee – 2017-2018



Details of events/activities held during academic year 2017-2018

Sr. No. of SAE Event / Activity	Day/Date	Year	Month	Time	Venue	Description of Activity
1.	13 th - 16 th July	2018	July	--	Chennai	SAE Aero-Design Challenge: Participation at SAE Aero-Design Challenge held at Anna University, Chennai

Details of participation in the event/activity
(Fill wherever is applicable or information is available. At least total need to fill)

No of students / faculty	COMP	ETRX	EXTC	IT	MECH	Total no of participants
FY						14
SY						
TY						
LY						
No of Faculty						

Report of event/activity

Competition: SAE Aero-Design Challenge

Overview

SAE Aero-Design Challenge is a national level competition where Aero-modelling teams from all over the country participate to be the best. The competition is held at Anna University, Chennai and managed by numerous officials from SAE and DRDO alike. The competition is divided into two parts, Micro and Regular Class. Micro class focuses on a smaller aircraft while Regular Class focuses on a much larger aircraft with high payload lifting capability. We took part in both the classes as we believed we had enough experience and support to compete in both the classes.

Preparations

We had set our goals at the start of new term in the month of July. From the start we always worked keeping it as the main priority. Analyzing the problem statement we made many prototypes, we then finalized the design decisions and fabricated a real prototype by the end of November. By this time, we already were in the optimization of performance stage and were in constant talks with our pilot if we can further optimize it to suit his needs. The final aircraft was ready by the end of the month of February. The team then started to focus on the creation of Design report and the preparation of Technical Presentation for both the classes respectively. At the end of the month of April both the aircrafts were ready for the competition and the team was ready for the stage of packing and then commuting to the competition.

Competition

The first day of the competition was mainly focused for preparing and informing the participants about the schedule and rules of the competition. The first day was for technical inspections and an opening ceremony for the students. The day was concluded with a speech by the chairman of SAE India.

The second day was heavily focused on the technical presentations and formal reports. The team was ready for the presentations and by the end of the day both the classes had finished their presentations. The team finalised some fabrication changes and was ready for the flights the next day.

On the third day, the team was scheduled for flights in the afternoon. The team was observing how other teams were faring and communicated with numerous other teams to get new ideas that they can use for their future designs. Unfortunately, due to unruly winds, our Micro Aircraft did not have a successful flight. Our Regular Class Aircraft on the other hand a very good flight round thus boosting our flight score.

Conclusion

The competition ended with the distribution of prizes for the respective winners. We were able to secure 1st and 3rd rank for Technical Presentation and Design Report respectively. The team had tasted victory for the first time in the past few years and this motivated us to go higher than ever before.

Details of prizes (wherever applicable fill all the entries)

Sr. No.	Name of the student	Department	Details of prize won	Remarks
1	Team Onyx India 2017-2018	MECH	1) 1 st in Technical Presentation (Micro Class). 2) 3 rd in Design Report (Micro Class). 3) 9 th Overall (Regular Class)	

Sample Photographs of the Event/Activity



