

Team History

SHELL ECO MARATHON 2014 (PHILIPPINES)



Team participated in Prototype Gasoline category and finished among the top ten teams in Asia.

SHELL ECO MARATHON 2016 (PHILIPPINES)



Team DTU Supermileage was the first team from India to fabricate Urban Concept vehicle. The Urban concept vehicles are practical road safe vehicles which can be easily manufactured. We participated in Shell Eco Marathon 2016 competition at achieved a mileage of 42.9 Kmpl and got 9th rank in the gasoline category.



**Shell
Eco-marathon**

Shell Eco-marathon ASIA 2016
Final results: UrbanConcept Gasoline

07/03/2016

Rank	Team n°	Team name	Country	Organization	Institution type	Competition category	Energy type	Best attempt (km/l)	Attempt 1 (km/l)	Attempt 2 (km/l)	Attempt 3 (km/l)	Attempt 4 (km/l)	Attempt 5 (km/l)
1	515	Sadeva	Indonesia	Universitas Indonesia	University	UrbanConcept	Gasoline	275.1				275.1	
2	506	DESU Eco Car Team - I.C.E.	Philippines	De La Salle University	University	UrbanConcept	Gasoline	138.7			158.7	158.6	
3	530	CK	Vietnam	Ho Chi Minh City University of Technology and Education	University	UrbanConcept	Gasoline	109	64	109			
4	508	Bengawan Team 1	Indonesia	Sabales Maret University	University	UrbanConcept	Gasoline	103.7		89.4		103.7	
5	513	Antawirya	Indonesia	Diponegoro University	University	UrbanConcept	Gasoline	77.4		69.4	77.4		
6	509	Danmuang Technical college	Thailand	Danmuang Technical College	School	UrbanConcept	Gasoline	62.2		62.2	56.2		
7	527	Team Urban	Pakistan	GRI of Engineering Sciences and Technology	University	UrbanConcept	Gasoline	57.2	44.5		56.2		57.2
8	512	CUT Eco-Racing UKC	Egypt	Cairo University Faculty of Engineering	University	UrbanConcept	Gasoline	48.9	44.5		48.9		
9	519	DTU Supermileage	India	Delhi Technological University	University	UrbanConcept	Gasoline	40.5			40.5		

Shell Eco Marathon 2017 Singapore



The team participated yet again in Singapore and recorded a personal best mileage of **81 kmpl** and secured rank 15th all over Asia out of the 85+ participating teams in the category. The vehicle mileage increased from 43kmpl last year to 81kmpl, almost doubling the numbers.



**Shell
Eco-marathon**

Shell Eco-marathon Asia 2017
Final results: UrbanConcept Internal Combustion Engine

23/03/2017

Rank	Team n°	Team name	Country	Organization	Institution type	Competition category	Energy type	Best attempt (km/l)	Attempt 1 (km/l)	Attempt 2 (km/l)	Attempt 3 (km/l)	Attempt 4 (km/l)	Attempt 5 (km/l)
1	501	Sadewa	Indonesia	Universitas Indonesia	University	UrbanConcept	Gasoline	374.9	323.2	374.9			
2	502	ITS Team 2	Indonesia	Institut Teknologi Sepuluh Nopember	University	UrbanConcept	Diesel	335.8		318	335.8	319.6	322.3
3	530	GARUDA UNY ECO TEAM	Indonesia	Universitas Negeri Yogyakarta	University	UrbanConcept	Gasoline	220.8	210.1	220.8	203	215	
4	507	Bengawan Team 2	Indonesia	Satelas Maret University	University	UrbanConcept	Diesel	213.5		207.8	210.9	213.5	
5	505	Cikal Ethanol	Indonesia	Institut Teknologi Bandung	University	UrbanConcept	Ethanol	197.9		197.9	153.6	156.2	
6	506	DSU Eco Car Team - I.C.E.	Philippines	De La Salle University	University	UrbanConcept	Gasoline	195.9		164.5	195.9		
7	503	SEMAR URBAN UGM INDONESIA	Indonesia	Universitas Gadjah Mada	University	UrbanConcept	Gasoline	185.7	156.6		180.1	185.7	
8	512	Antawinta	Indonesia	Diponegoro University	University	UrbanConcept	Gasoline	151	127.5			151	133.1
9	508	Horus Media	Indonesia	University of Sumatera Utara	University	UrbanConcept	Ethanol	143.2			139.1	143.2	
10	504	DI-GOLD ENERGY	Vietnam	Lac Hong University	University	UrbanConcept	Ethanol	136.7		108.2		136.7	
11	515	CUT Eco-Racing UC	Egypt	Cairo University Faculty of Engineering	University	UrbanConcept	Gasoline	118.6		104.3	118.6		115.1
12	551	GANTENG	Indonesia	Institut Teknologi Medan	University	UrbanConcept	Ethanol	94.2	79.3	82.4	94.2		
13	541	UST Eco-Tigers II	Philippines	University of Santo Tomas (UST)	University	UrbanConcept	Diesel	85	85	81.5	72.8		
14	544	Cardinals Haryana	Philippines	Mapua Institute of Technology	University	UrbanConcept	Diesel	81.9	81.9		72		
15	517	DTU Supermileage	India	Delhi Technological University	University	UrbanConcept	Gasoline	80.7	77	80.7			
16	546	Mesin Pajap Diesel Team	Indonesia	PoliTeknik Negeri Pontianak	University	UrbanConcept	Diesel	70.5		54.3	66.6	70.5	70.3
17	526	U.A.R.T G-UV	Indonesia	Institut Teknologi Nasional Malang	University	UrbanConcept	Gasoline	48.4	48.4	46.3			
18	553	Team Monash UC	Malaysia	Monash University, Malaysia	University	UrbanConcept	Ethanol	45.3			45.3		
19	524	Team Red-X	Bangladesh	Ahsanullah University of Science & Technology	University	UrbanConcept	Gasoline	42.5	42.5				



**Shell
Eco-marathon**
ASIA 2017

CERTIFICATE OF RESULTS

PRESENTED TO

DTU Supermileage
Delhi Technological University

In recognition of your exceptional work in vehicle design, fabrication, testing and achievement of the energy efficiency of **80.7 km/l** in the **UrbanConcept Gasoline** category.

Horacio Koch

Horacio Koch
Global Technical Director
Shell Eco-marathon

March 15, 2017



**Shell
Eco-marathon**
ASIA 2018

CERTIFICATE OF TECHNICAL INSPECTION

PRESENTED TO

DTU Supermileage
Delhi Technological University

In recognition of your exceptional work in vehicle design, fabrication, testing and successful completion of the **TECHNICAL INSPECTION**.

Horacio Koch

Horacio Koch
Global Technical Director
Shell Eco-marathon

March 15, 2018

**DRIVING
INNOVATION**

Shell Eco-marathon: Europe challenges students from across the region to design, build, test and drive ultra-efficient vehicles.



**DRIVING
INNOVATION**

Shell Eco-marathon Asia challenges students from across the region to design, build, test and drive ultra-efficient vehicles.



Shell Eco Marathon2018 (Singapore)

For the first time in its history, the team participated with 2 vehicles in Singapore. Our Battery Electric Prototype vehicle recorded a mileage of **156.9 km/kWh** and secured **7th rank** in its maiden event out of the 35+ participating teams. Our IC Engine Urban Concept couldn't record a successful run after clearing the technical inspection but still bagged the **Communications Award** among 118 teams from 22 countries.



The team is the first team from the country to bring home The Communication Award.

	Motorists	Business customers	Energy and innovation	Sustainability	About us
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Communications

Winner:

DTU Supermileage
Delhi Technological University, India

The entire team was involved in the communications process and it was clear that every team member was committed to the outreach. They took a data-driven approach to understanding their target audience and their motivations in order to optimize their communications outcomes across all three challenges. They not only created great content that resided on the media channels – they took it one step further, going into the villages and driving home the Eco-Marathon and fuel efficiency story through games and competitions that made learning fun. They also made effective use of influencers including meetings with the Deputy Chief Minister and India's fastest female biker to further amplify their messages. For their infectious energy and well-planned communications campaign, team DTU Supermileage takes home this year's award.



Team DTU Supermileage (registered as DTU E-Supermileage in the competition) got **7th rank** in the Electric Prototype category in Shell Eco Marathon 2018. Shell Eco Marathon Asia 2018



**Shell
Eco-marathon**

Shell Eco-marathon ASIA 2018
Final results: Prototype Battery electric

14/03/2018

Rank	Team n°	Team name	Country	Organization	Institution type	Competition category	Energy type	Best attempt (km/kWh)	Attempt 1 (km/kWh)	Attempt 2 (km/kWh)	Attempt 3 (km/kWh)	Attempt 4 (km/kWh)	Attempt 5 (km/kWh)	Attempt 6 (km/kWh)
1	301	HuaQi EV	China	Guangzhou College of South China University of Techn	University	Prototype	Battery electric	511		485.5	511			
2	302	BIT Ecopower Club	China	Beijing Institute of Technology	University	Prototype	Battery electric	355.5	354.1	308.8	336.8	355.5		
3	309	Team AVERERA	India	Indian Institute of Technology - Banarus Hindu University	University	Prototype	Battery electric	349.6			298.3	323	349.6	
4	307	SEMAR PROTO UGM INDONESIA	Indonesia	Universitas Gadjah Mada	University	Prototype	Battery electric	269.7	269.7	241.7				
5	306	Baravia Generation Team	Indonesia	Universitas Nagari Jakarta	University	Prototype	Battery electric	256		256	251.7			
6	305	Girton Grammar Shell Eco Marathon Team	Australia	Girton Grammar School	School	Prototype	Battery electric	243.8	243.8	230.9	221.2			
7	322	DTU E Supermileage	India	Delhi Technological University	University	Prototype	Battery electric	156.9	145.6	141.8	156.9	155.9		
8	327	IMEI	Indonesia	Universitas Muhammadiyah Sidoarjo	University	Prototype	Battery electric	151.3		151.3				
9	303	PNRU Collegian Junior	Thailand	Phonakorn Rajabhat University	University	Prototype	Battery electric	135.4				135.4		
10	311	Pekalongan Brunei SSE	Brunei	Pekalongan Brunei	University	Prototype	Battery electric	117	68.2	102.3	91.3		117	114
11	320	UBD-Audio	Brunei	Universiti Brunei Darussalam	University	Prototype	Battery electric	115.9		115.9				
12	315	PNEC NUST PROTOTYPE	Pakistan	National University of Sciences and Technology (NUST)	University	Prototype	Battery electric	103.1		103.1				
13	324	NU Team	Kazakhstan	Nazarbayev University	University	Prototype	Battery electric	97.4	97.4		92.6			
14	325	UMF Tech	Malaysia	University Malaysia Pahang (UMP)	University	Prototype	Battery electric	84.1			84.1			
15	317	DSU-O Stallions v1.0	Philippines	De La Salle Dasmariñas	University	Prototype	Battery electric	64.2		64.2				
16	304	Hammerhead ARC	Pakistan	Ghulam Ishaq Khan Institute of Engineering Sciences and	University	Prototype	Battery electric	47.7			47.7			



The team won the much coveted Communication Award 2018 and was awarded a cash prize of 3,000USD.

Future Plans

The team is working to participate in Shell Eco Marathon Challenger Event India to be held in Chennai from 6th December 2018 to 9th December 2018. The vehicles are in the testing phase right now and we are looking forward to achieving podium finishes in the competition. The team will further take part in Shell Eco Marathon Asia to be held in Indonesia in the month of March 2019.

List of Team Members

The following are the credentials of the team members that took part in the competitions and contributed to win the awards.

Serial No.	Name	Roll No.	Aadhar Card No.
1	Bhavy Dikshit	2K12/AE/023	362637691885
2	Akash Sharma	2K13/ME/013	362637691885
3	Harshit Arya	2K14/ME/066	362637691885
4	Samarth Jain	2K14/ME/145	362637691885
5	Jairaj Gambhir	2k14/me/070	362637691885
6	Shrey Kansal	2k15/ME/156	362637691885
7	Apoorv Dubey	2k15/ME/036	362637691885
8	Shikhar Jain	2K15/AE/061	362637691885
9	Nitish Bajaj	2K15/ME/102	362637691885
10	Chaitanya Wadhwa	2K15/PE/10	362637691885
11	Rachit Chhabra	2K15/ME/122	362637691885
12	Prabhash Chauhan	2k16/ME/112	362637691885
13	Utkarsh Garg	2k16/ME/183	362637691885
14	Sourajit Bhattacharjee	2k16/ME/170	362637691885
15	Ujjwal Suri	2K16/ME/182	362637691885
16	Vaibhav Nirmal	2K16/AE/088	988818680635
17	Tejasvin Goyal	2k16/EC/174	825703875152
18	Ishita Garg	2k16/ae/037	277263199206
19	Utkarsh Roy	2k16/ME/184	953525770673
20	Abhinash Bharat	2k16/ae/002	498872836541
21	Pratikshit Arora	2k16/ME/118	911227991105



TEAM DTU SUPERMILEAGE

PROJECT REPORT

About Us

One of the main concerns of our generation is the gradual increase of the earth's temperature, in other words, the phenomenon called Global Warming. This constant elevation of the earth's temperatures could lead to catastrophic results in a matter of decades, such as the melting of the poles, disappearing of islands and extinction of races.

The DTU Supermileage Team is the first team from India to design a Supermileage vehicle.

The team was established in 2005 keeping in mind the looming threat posed by future fuel crisis. The team aims to develop a vehicle which explores the maximum mileage that can be achieved from a single liter of gasoline and at the same time reduce the impact of gasoline powered vehicles on the environment without the need for major cost. The team has unique technical feats such as designing and manufacturing a custom cylinder head for our vehicle's engine.

- ▶ The **DTU Supermileage Team** is the **first team from India** to design a Supermileage vehicle.
- ▶ It was established in 2005 keeping in mind the looming threat posed by future fuel crisis.
- ▶ The team aims to develop a vehicle which explores the maximum mileage that can be achieved from a **single liter of gasoline** and also to reduce the impact of gasoline powered vehicles on the environment without the need for major cost.

Urban Concept Vehicle

Team DTU Supermileage is the first team from India to fabricate an Urban Concept Vehicle, a vehicle which is fabricated keeping the roads in mind and has all the safety features required for urban running.

- We designed and fabricate a fuel efficient vehicle powered by a modified, iso-octane burning engine.
- Applying our engineering knowledge and experience to design and build a vehicle with high mileage and adequate safety features.
- Achieving this target by in-house fabricating a composite light weight aerodynamic body that houses a fuel injected engine designed around the existing crankcase.



Prototype (Battery Electric)

Keeping in mind the recent development in the field of automobile, the team decided to build an electric vehicle to contribute to the recent movement of switching to Electric Vehicles.

- We designed an Electric Propulsion system purpose built from Arduino Schematics.
- Fabricating an ultra aerodynamic light weight body using Carbon Fiber that gives strength and help reduce the drag coefficient.
- Applying Ackermann Steering Mechanism and Mechanical Braking system for a safe and efficient drive.



The Competition

Shell Eco Marathon Asia



Keeping in mind the threats our environment is currently under, Shell created an Eco-Marathon competition few decades ago, challenging students to not only look for other alternatives of energy but also, to improve and optimize the ones that can be found today. More than 120 student teams from 18 countries are gathering in Singapore to compete in this year's Shell Eco-marathon Asia. It takes place from March 8 to 11 at the Changi Exhibition Centre as the highlight of Make the Future Singapore – a four-day public festival of ideas and innovation for Asia.

This year's event was held in Singapore at the Changi Exhibition Centre from March 8-11.

Team Performance

The team participated in 2 categories namely, Battery Electric Prototype and Gasoline Urban Concept Vehicle.



The Battery Electric Vehicle performed exceedingly well for its debut year finishing **7th** with a mileage of **156.9 km/kWh** among the 30+ teams that competed in the battery electric category




Shell Eco-marathon ASIA 2018
Final results: Prototype Battery-electric

14/03/2018

Rank	Team n°	Team name	Country	Organization	Institution type	Competition category	Battery type	Best attempt (km/kWh)	Attempt 1 (km/kWh)	Attempt 2 (km/kWh)	Attempt 3 (km/kWh)	Attempt 4 (km/kWh)	Attempt 5 (km/kWh)	Attempt 6 (km/kWh)
1	301	HuoQi EV	China	Guangzhou College of South China University of Techn	University	Prototype	Battery-electric	511						
2	302	Bil Eco-power Club	China	Beijing Institute of Technology	University	Prototype	Battery-electric	355.5	354.1	308.8	336.8	355.5		
3	309	Team AVERERA	India	Indian Institute of Technology - Banarus Hindu University	University	Prototype	Battery-electric	349.6			298.3	323	349.6	
4	307	SEMAR PROTO UGM INDONESIA	Indonesia	Universitas Gadjah Mada	University	Prototype	Battery-electric	269.7	269.7	241.7				
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7	322	DTU E-Supermileage	India	Delhi Technological University	University	Prototype	Battery-electric	156.9	145.6	141.8	156.9	155.9		
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10	311	Palaenik Brunei SSE	Brunei	Palaenik Brunei	University	Prototype	Battery-electric	117	68.2	102.3	91.3		117	114
11	320	UBO Auto	Brunei	Universiti Brunei Darussalam	University	Prototype	Battery-electric	115.9		115.9				
12	315	PNIC-NUST-PROTOTYPE	Pakistan	National University of Sciences and Technology (NUST)	University	Prototype	Battery-electric	103.1		103.1				
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16	304	Hammerhead ARC	Pakistan	Ghokan Ishaq Khan Institute of Engineering Sciences and	University	Prototype	Battery-electric	47.7			47.7			



The team **WON** the **Communication Award Asia** among the 130+ student teams across Asia. The prize is awarded for creating the maximum Awareness among our community. We also received prize money of **USD 3000** for our achievement. Communication about the team greatly helps in securing sponsors.

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Communications

Winner:
*DTU Supermileage
Delhi Technological University, India*

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The Urban Vehicle passed the Technical Inspection and was deemed safe and fit for running. During the official run for recording the mileage the engine of the vehicle had a malfunction. The vehicle couldn't register an official run in the stipulated time. During the practice runs the team had recorded mileage in excess of 130kmpl.

Future Plans

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