

3D-Printed Electric Cars Built By Singapore Students

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Brendan Byrne

A group of students at Nanyang Technological University designed and built two electric cars using 3D printing technology.

The technology has been used in a whole variety of different fields, but the first model marks the first time that a 3D-printed “urban solar electric car” has been made in the country. The NTU Venture (NV) 8 is not just your standard city runaround, however, it’s a race car, writes Angela Moscaritolo of [PC Mag](#).



3D-printed electric cars

The 3D-printed plastic body is mounted on a carbon fiber chassis, which keeps the weight of the vehicle to a minimum. “Despite being an urban concept car, it is no slouch and can reach a top speed of 60 kilometers per hour, while maintaining low-energy consumption,” said computer engineering student Ilmi Bin Abdul Wahab, who led the development of NV8.

A separate group of students at the university built another car, named NTU Venture (NV) 9. This three-wheeled racer makes use of tilting technology inspired by motorcycle racing to allow it to take corners at high speeds.

“The resulting design looks like a fusion between a F1 race car and a glider plane, with an all surround canopy for increased visual awareness,” said NV9 team manager Winston Tan, who is studying electrical and electronic engineering.

The two cars will face off in the Shell Eco-marathon Asia, which is scheduled to take place later in

February in the Philippines.

Students driving innovation

The cars contain as many as 150 3D-printed parts, and were designed and built from scratch over the course of the last year. Student innovations such as silicon solar cells which can bend to fit the shape of the bodywork have been implemented in order to attain the highest possible levels of fuel efficiency.

“We are extremely proud to have designed and assembled a 3D-printed body shell for the electric car, which is Singapore’s first and probably Asia’s first 3D-printed concept car,” said Professor Ng Heong Wah, who acted as a mentor to the teams. “The 3D printed car body was pushing existing technology to the limits and we are so pleased that it has paid off.”

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