

Vis projekt	
Projekt ID	71110
Status	Under redigering
Projekttype	Specialkursus
Projektansvarlig	Jens Christian Andersen, jca@elektro.dtu.dk
Institut	Institut for Elektroteknologi
Dansk titel	Syntese: Indendørs objekt detektering baseret på RGB-D data og neuralt netværk
Engelsk titel	Synthesis: Indoor object detection based on RGB-D data and neural network
Læringsmål for projektet - dansk	(Ikke angivet)
Læringsmål for projektet - engelsk	<p>3D object detection ground on deep learning is getting attention these years. Since LiDAR is quickly updated, deep learning makes self-driving cars possible. In the indoor scenario, RGB-D camera still plays an important role in 3D-scene understanding for indoor robots, because of the lower price and higher resolution. Even though high-performance GPUs provide the possibility to handle tons of data and to achieve high accuracy, deep neural networks with a large number of learnable parameters pose challenges to the real time of the detection algorithms, especially in robot applications. Well-designed neural networks are becoming the new hot spot in this promising field since the improvements in hardware are harder and harder to make.</p> <p>The purpose of the course is to give the students a glance into object detection in indoor scenario based on deep neural networks. Students are required to model a specific task and propose a solution and verify their method by code implementation. After the class, students are expected to get a further vision into the 3D object detection associated with deep learning.</p> <p>Learning objective</p> <p>A student has met the object of the course will be able to:</p> <ul style="list-style-type: none"> • Understand the basic concepts on indoor 3D object detection • Know the principle of 3D convolutional neural networks • Design an efficient deep neural network • Use popular open-source software library and toolbox to concretize the idea • Keep code under version control with Git
ECTS Point	5
Startdato	10. aug 2020
Afleveringsdato	31. aug 2020
Karakterskala	Bestået/Ikke-bestået
Evalueringsform	Intern
Evalueringsform (eksamen)	Based on project report with marked contributions
Samarbejdsinstitutter	Intet samarbejdsinstitut
Samarbejdsvirksomheder	(Ikke angivet)
Virksomhedens postnummer	
Samarbejdsform	(Ikke angivet)
Projekt udføres i	Danmark
Antal måneder i udlandet	(Ikke angivet)
Vejledere	Jens Christian Andersen (jca@elektro.dtu.dk , 45253581)
Studerende	200101 (Zhao Gong) 192230 (Manxi Lin) 192231 (Kun Du)
Eventuelle kommentarer til Afd. for Udd. og Studerende	The course can count as GR3 (general competence) for MSC Electro technology and MSC Autonomous systems.
Oprettelsesdato	09. aug 2020