Yaolin Ge

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Research Engineer in Computer Vision and Machine Learning

This is Yaolin GE, a final year master student from the group of Underwater Communications at SMaRC here at KTH, expected to graduate by Jun 2020, a creative and enthusiastic explorer who really enjoys making a difference. My background so far has been quite interdisciplinary, spanning the border of classical ocean engineering to underwater communications, and the potential to continue this sort of skill training is what first attracted me to pursue this research engineer position with an emphasis on computer vision and machine learning at RPL, pursuing this practical program with its field in ML-enhanced computer vision system, will allow me to learn from professors at the top of this exciting field. This eye-opening training program will enable me to pursue my research interests in underwater perception to a much greater depth while also expanding my future career opportunities within the underwater intelligence. It is also worth mentioning that joining a community of other like-minded individuals will be a valuable chance for collaboration and personal development. I believe that I am a highly motivated student and also a well-qualified applicant.

Artificial Intelligence is playing an increasingly important role in many industries and it will play a crucial role in the future exploration of our ocean too. The research engineer program attracts me to engage even more via learning and implementing advanced AI + computer vision technologies to enhance the smart autonomous underwater vehicles for future underwater perception for our deep ocean.

As a result of the strong interest in exploring underwater robotics and deep learning, I urged myself to learn more under an advanced study environment, for which I then pursued my dual-degree master's study within Marine Technology at NTNU-KTH. The interdisciplinary study and research environment rewarded me a lot in terms of practical skills and personal growth. I have been involved in the Revolve Project at NTNU during the last year, in which I developed the obstacle avoidance model for the ELD car to conduct certain manoeuvres based on the sensor fusion model using Lidar and Camera, together with Radar. I do believe that this experience did pave the way for this research engineer program even more. Apart from the formal curricular education, I did also push myself forward to gain some fruitful deep learning skills and others using powerful MOOC-platforms such as Coursera and IEEE CEU. Thankfully, those experiences enhanced my ability to a deeper level to utilize engineering methods to solve practical problems. I feel much more confident about my skillset and mindset. At present, I am conducting my master's degree project on the signal processing part of the underwater navigation system for the range-doppler estimation objectives.

With this wide range of experiences, I have gradually developed a liking taste in the AI and underwater robotics field. I develop motivation from the level of responsibility and independence required of a graduate student and relish the opportunity to prove myself at this level.

To conclude, I expect to contribute to the practical researches with my professional knowledge and practical skills obtained from this research engineer program at KTH. With full confidence in me as well as the professional training you provide in the program, I believe that my plan will be realized any time soon. Thank you very much for your time and consideration

Sincerely,