

Towards high performance and efficient brain computer interface character speller : convolutional neural network based methods Shan, H.

Citation

Shan, H. (2020, February 25). *Towards high performance and efficient brain computer interface character speller : convolutional neural network based methods*. Retrieved from https://hdl.handle.net/1887/85675

Version: Publisher's Version

License: License agreement concerning inclusion of doctoral thesis in the

Institutional Repository of the University of Leiden

Downloaded from: https://hdl.handle.net/1887/85675

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle http://hdl.handle.net/1887/85675 holds various files of this Leiden University dissertation.

Author: Shan, H.

Title: Towards high performance and efficient brain computer interface character speller :

convolutional neural network based methods

Issue Date: 2020-02-25

Acknowledgements

When I am writing this page, I can shout "Finally, I finish my PhD! Cheers!".

I would like to have a big hug with my parents! I know it is not easy for you to have you son studying abroad. You miss me so much and are often worried about whether I can take good care of myself. Sometimes I am bad-tempered, but you understand me! When I face difficulties, your words are so powerful for me to face my PhD journey. Your supporting makes my heart stronger and stronger. You are always my belief to be a better man! I am proud that you are proud of me!

I am so lucky to have you, my wife **Yuye Que!** I am very grateful that you always accompany me to face and fight against the difficulties. Actually, you are a positive and optimistic person. It is your magic that you are able to get me full of hopes when I feel hard. Your excellent Chinese cuisine always makes me feel warm in my heart. The PhD journey in Leiden is bitter but the life with you in Leiden is sweet! My mom said you are the lucky star to me! Undoubtedly and Absolutely!

I would like to say a big "Thank you" to **Chuan Luo!** Every time I come to you for help, you are always patient and kind no matter how busy you are. I still remember that spring when we walk along the small river behind your house and talk about the recent unhappiness for many times. Your words always calm me down when I feel anxious. I believe our friendship will never fade away.

Many thanks to **Yu Liu!** Thanks so much for your help to let me understand further about the deep learning word. I learn a lot from each discussion with you. You always share time with me to answer my questions very patiently. Your knowledge and critical thinking give me many inspirations in my research field. Having a big brother like you is such a happy thing!

It is a pleasure to work in Leiden Embedded Research Center (LERC)! LERC is a big family. Thanks for meeting the friendly and lovely colleagues in LERC. **Di Liu** often encourages me and gives me suggestions. **Jelena Spasic**'s hard working attitude makes a good example for me. Thanks to **Sobhan Niknam** for organizing activities in LERC. **Erqian Tang**'s optimism is really appreciated by me. Also, thanks for the discussions and help from other colleagues! Working in LERC is an unforgettable memory in my life!

Last but not of less importance, thanks for the friends in Leiden Institute of Advanced Computer Science (LIACS) and in Leiden outside the academic world. There are many memorable gatherings where I can eat the delicious Chinese food cooked by you guys and have talks about our life in the Netherlands. We have basketball matches every Friday night where I can forget research and relax myself. Thank you for organizing activities to experience the Netherlands where I can enjoy the beautiful scenery. Hope you everything goes well in the future!

Again. I owe my sincere gratitude to all of you beyond the words.

Curriculum Vitae

Hongchang Shan was born on October 11, 1989 in Heilongjiang, China. He obtained his B.Eng degree in Automation Science and Technology from Xi'an Jiaotong University, China in 2012. He joined the Leiden Embedded Research Center (LERC), part of the Leiden Institute of Advanced Computer Science (LIACS) at Leiden University, as a Ph.D. candidate in November, 2015. In LERC, he has been working, towards his Ph.D degree, as a research assistant. Besides his work as a researcher, he was involved as a teaching assistant in the Digital Technique, Computer Architecture, and Embedded Systems and Software courses.