Report of MERIT Corporate Internship

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Internship Begin and End Dates

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Host

NEC Central Research Laboratories

Report

  The objective of research in this internship is to apply machine learning methods for end-to-end available bandwidth estimation method which was developed in NEC Central Research Laboratories.

  In this method, sender send a probing packet train for receiver and receiver estimates available bandwidth by detecting changes of the observed queuing delays of probing packets. It is difficult to detect changes of queuing delays in LTE networks, but it is possible to estimate available bandwidth from those queuing delays by appropriate modeling.

  I applied some machine learning methods to estimate end-to-end available bandwidth from time intervals of packets in packet train data. Some of those machine learning methods showed higher accuracy as compared to prior method. I think this result indicates application possibility of machine learning methods to end-to-end available bandwidth estimation.

  I worked with researchers who had various specialized knowledge and researched in different research area from research area of my research in university. I think experience in this internship is very meaningful for me. I also get practical experience of machine learning methods which would be useful for my research.

Acknowledgement

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