At Singapore SMART center I wrote GIS data processing programs for a transportation simulation platform developed by MIT and Singapore researchers.

My UROP project at the Speech Communication Lab involves developing a set of landmark label processing and analysis tools needed for modeling speech acoustics.

I worked at the Evolutionary Design & Optimization Group on improving the algorithm of a wind farm layout optimization software.

Automatic Speech Recognition has achieved its state-of-art performance using mainly statistical methods. Although succeeding under relatively undisturbed conditions, it can still be improved in general, noise-bound settings. Motivated by evidence that human speakers identify phonemes by detecting specific sound patterns or “acoustic cues”, the Speech Communication Lab is devoted to studying these cues for the purpose of constructing a better acoustic model for ASR. My work is to model the correlation between the variations of the cues and the corresponding speaking context. We believe that such knowledge can effectively reduce the unpredictability in ASR, leading to better performance.