

Article

TickPhone App: A Smartphone Application for Rapid Tick Identification Using Deep Learning

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Table S1. Comparison of tick identification results obtained by our TickPhone app and provided by the Connecticut Veterinary Medical Diagnostic Laboratory.

[illegible]

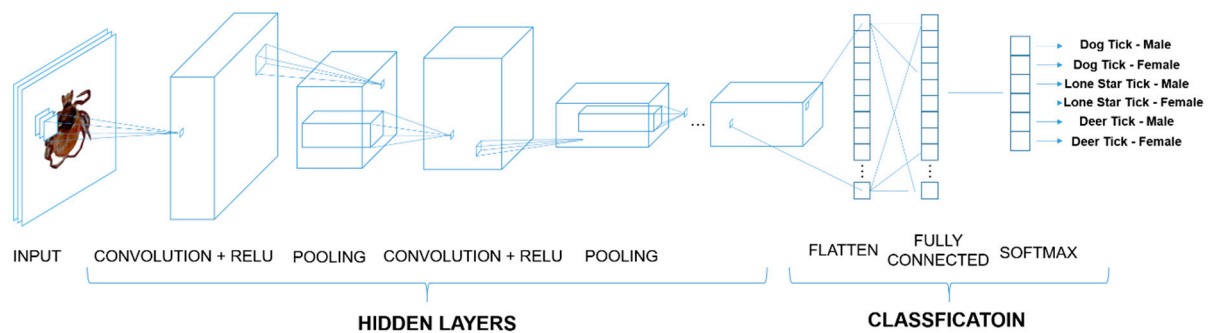


Figure S1. The architecture of the conventional neural network developed for tick identification.

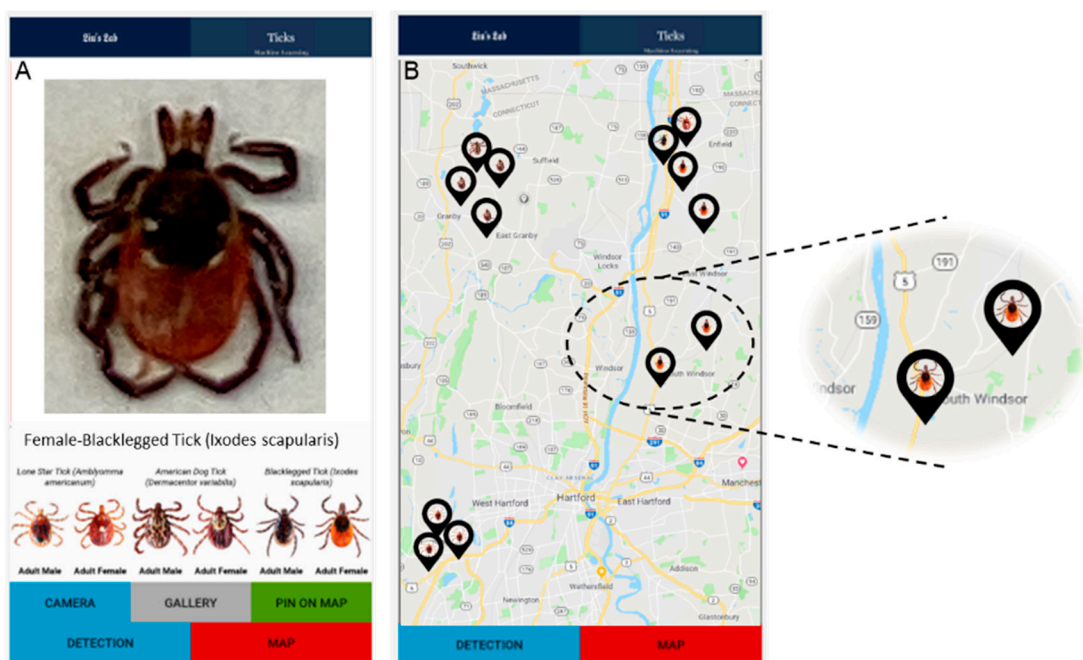


Figure S2. Interfaces of our TickPhone app. (A) Tick identification, and (B) spatiotemporal mapping of tick identification results.

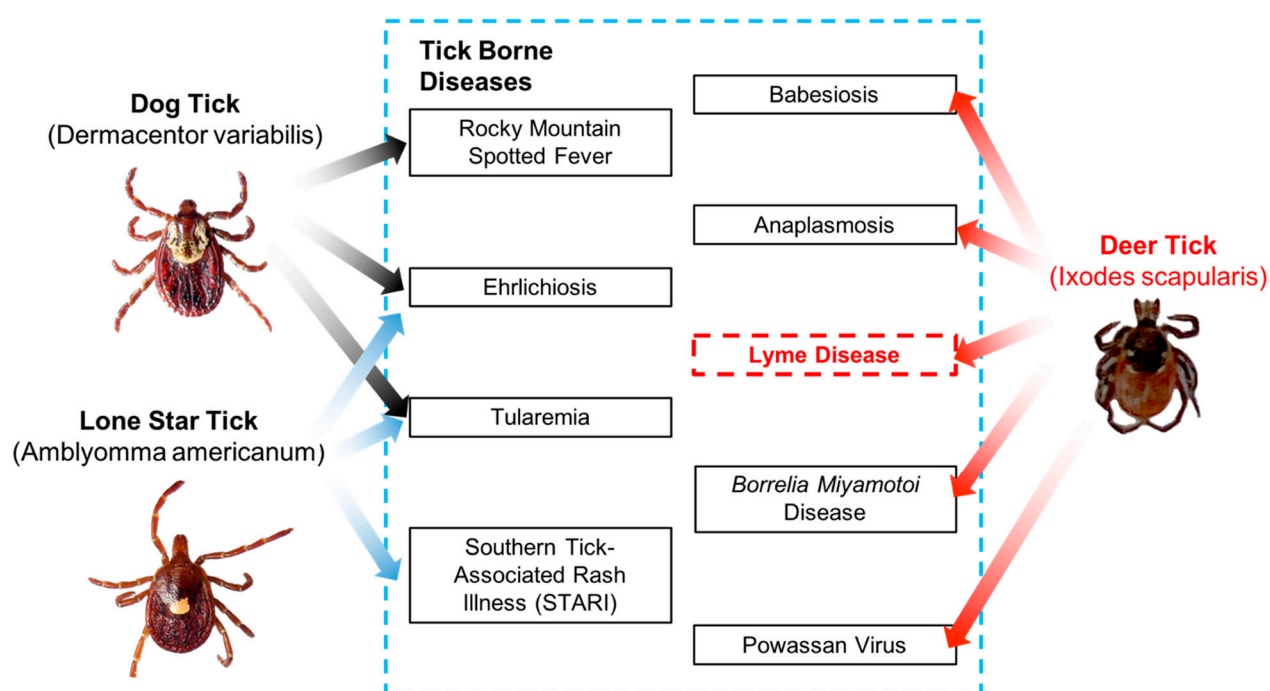


Figure S3. Three types of common ticks (e.g., deer tick, dog tick, and lone star tick) and their transmitting tick-borne diseases.

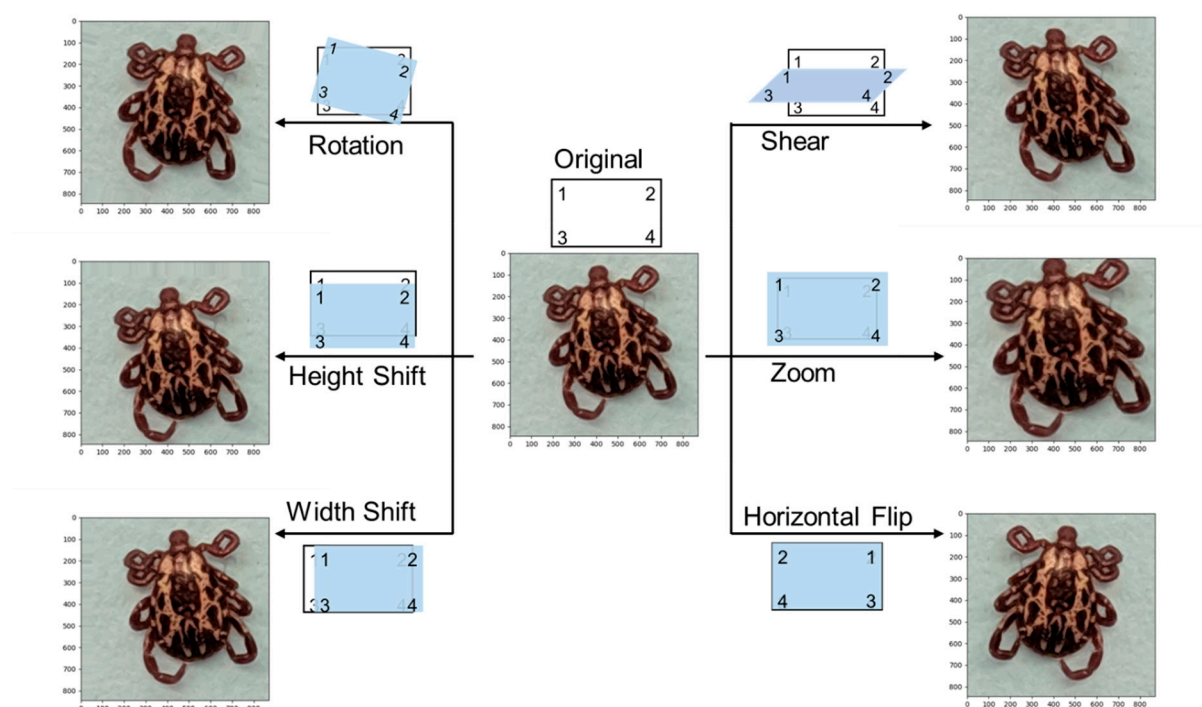


Figure S4. Data augmentation from original pictures through different methods: i) rotation with 30% range, ii) height shift with 30% range, iii) width shift with 30% range, iv) shear with 30% range, v) zoom with 30% range, and vi) horizontal flip.



(A)



(B)

Figure S5. Examples of the poor-quality tick photos caused by glare (A) or being out of focus (B).