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Contribution - Predicting remaining duration of cataract surgeries

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Abstract

Every year around the world, over 10 million sight saving cataract surgeries are performed. Under such pressure, efficient organization of surgical wards and operating rooms becomes critical. To this end, knowing the remaining surgical duration (RSD) is key since it helps streamline patient throughput and workflows. In this context, we propose CataNet, a method for cataract surgeries that predicts the RSD. CataNet benefits from joint prediction of the surgeon's experience and the current phase of the surgery. CataNet significantly outperforms the state-of-the-art RSD estimation methods, which were not designed specifically for cataract surgeries. We investigated the elements of CataNet that provide this improvement and detail them.