Pose Estimationsec:estimation We can derive the epipoles, which are the projections of the first camera center onto the second and third images, from a trifocal tensor $\mathcal{T}$. The epipole $e_{31} is determined as the shared point of inters$ $vectors of T1, T2, and T3. Similarly, the epipole e_{21} is found as the common point of intersection among the lines represented by$ $vectors of T1, T2, and T3. Subsequently, we can compute the fundamental matrices equation gathered F_{21} = [e_{21}]_\times [T_1 e_{31}, T_2 e$

The essential matrices can be derived from the fundamental matrices and the calibration matrices $K_i using the formula [t_{ij}]_\times R_{ij} = E_{ij} = K_i^\top F_{ij} K_j]. From these essential matrices, the relative orientations (R_{21}, t_{21}) and (R_3$ $1||, while the relative scale \lambda of t_{31} can be determined by triangulating the space points \{X^n\}_n from the first two cameras' proje$