

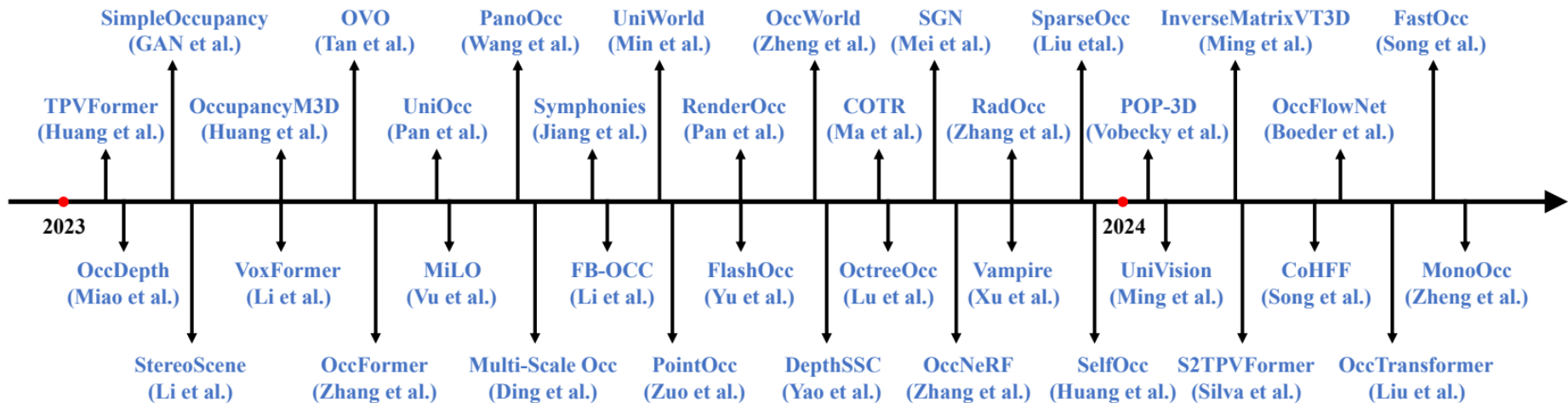
Vision-based 3D Occupancy Prediction in Autonomous Driving: A Review and Outlook

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Problems & Ideas

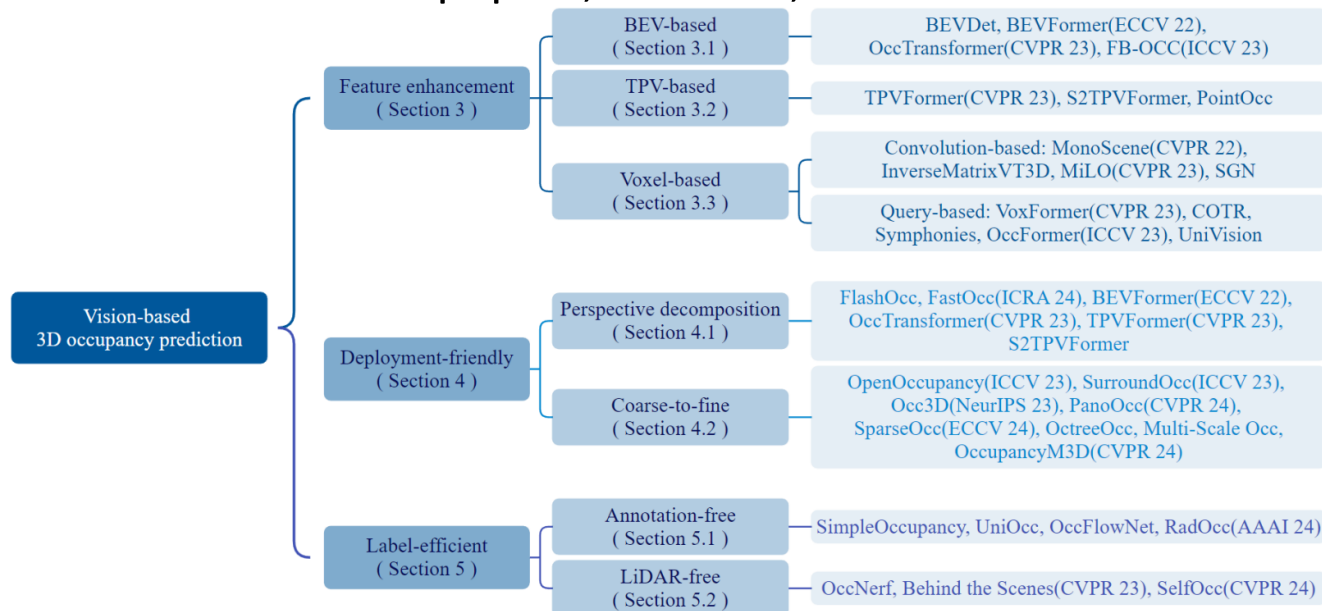
- Problems with the current review of occupancy prediction:
 - The current review of occupancy prediction lacks comprehensive coverage of the latest work.
 - The current review of occupancy prediction does not provide a proper categorization and organization of existing methods.
- Ideas: This paper broadly covers the recent advances tailored for vision-based 3D occupancy prediction, systematically summarizes the current methods into fine-grained categories from novel perspectives.



Chronological overview of vision-based 3D occupancy prediction methods.

Main Contributions

- Contributions:
 - This paper is the first comprehensive review tailored to the vision-based 3D occupancy prediction methods for autonomous driving;
 - This paper structurally summarizes vision-based 3D occupancy prediction methods from three views: feature-enhanced, computation-friendly and label-efficient approaches;
 - The paper proposes some inspiring future outlooks for vision-based 3D occupancy prediction and provides a regularly updated github repository to collect the related papers, datasets, and codes.



Hierarchically-structured taxonomy of vision-based 3D occupancy prediction for autonomous driving.