Supplementary Table S2. Full list of 103 hand-crafted tabular features.

Group	Count	Features
Kinematic	29	sog_mean, sog_std, sog_min, sog_max, sog_p25, sog_p50, sog_p75, sog_skew, sog_kurt, cog_mean, cog_std, cog_circ_var, cog_p25, cog_p50, cog_p75, dsog_mean, dsog_std, dsog_max, dcog_mean, dcog_std, dcog_max, rot_mean, rot_std, rot_max, accel_mean, accel_std, accel_max, decel_mean, jerk_std
Geometric	10	path_length_km, bbox_lon_extent, bbox_lat_extent, bbox_area_km2, convex_hull_area_km2, straightness_ratio, end_to_end_distance_km, max_displacement_km, mean_displacement_km, gyration_radius
Statistical	28	duration_sec, duration_hours, n_points, sampling_rate_hz, mean_dt, std_dt, median_dt, max_dt, lon_mean, lon_std, lat_mean, lat_std, lon_p25, lon_p75, lat_p25, lat_p75, sog_zero_ratio, sog_low_ratio, sog_high_ratio, cog_change_count, stop_count, stop_duration_total, stop_duration_max, mean_stop_gap, traj_entropy, sog_autocorr_1, cog_autocorr_1, lon_lat_corr
Frequency-domain	23	sog_fft_peak_freq, sog_fft_peak_mag, sog_fft_top1_freq..top10_freq, cog_fft_peak_freq, cog_fft_peak_mag, cog_fft_top1_freq..top10_freq, sog_spectral_entropy, cog_spectral_entropy, sog_dominant_period
Segment-level	13	n_segments, mean_segment_length, std_segment_length, max_segment_length, min_segment_length, n_speed_regimes, fraction_in_dominant_regime, regime_change_rate, dwell_time_ratio, transit_time_ratio, mean_dwell_duration, mean_transit_duration, segment_speed_var

Note: the exact feature names used in the released code base may differ slightly; the released feature_extractor.py is authoritative.