Next-Season Projections

Athlete: Athlete Report **Date:** June 26, 2026 **Transition:** Junior → Senior **Sex:** Female

How to Read This Report

These projections estimate next-season performance from historical patterns — how thousands of similar high school athletes in the region have progressed from one season to the next. They are a data-informed starting point for coaching conversations, not predictions or promises. Here is what each term and symbol means.

THE SUMMARY TABLE & EVENT CARDS

Current (Season) Best — the athlete's fastest entered time this season for that event.

Projected Next Season — the model's single best estimate — the middle of the likely outcomes.

Expected Range — the band the result is most likely to land in. A wider band means more uncertainty for that event.

Transition — the grade-to-grade change the projection covers (e.g. Junior → Senior).

HISTORICAL FIT

A plain-language rating of how closely the model has matched *past* results for that event. It describes the strength of the historical pattern the estimate rests on — *not* how accurately the model will predict any one athlete's next season:

Strong R^2 0.90+ · **Good** 0.80–0.89 · **Fair** 0.70–0.79 · **Limited** below 0.70

PEER ESTIMATE VS. POPULATION MODEL

Population model — an estimate built from the entire historical group of athletes.

Peer estimate (★) — an estimate built only from athletes who were at a similar level (within a small window of this athlete's current best). For an athlete already near the top of the field, this peer group is usually a more realistic comparison than the full population.

Improved — the share of those similar athletes who actually got faster the following season, with the average change.

READING THE MODEL CHART

Each row is a different model — a different mix of events used to make the estimate (for example, using the 200m and 400m together to estimate the 300m).

Dot & horizontal bar — the dot is that model's estimate; the bar shows its expected range.

Gold diamond & dotted line — the current-season best, for reference.

"FIT R^2" (MODEL FIT)

The small **fit R^2** under each model is a score from 0 to 1 of how closely that model's pattern has matched real results in past data. Higher means the relationship has been more consistent historically — a model at 0.95 rests on a tighter, more dependable pattern than one at 0.70. It describes the historical fit of the pattern, *not* a guarantee for any one athlete.

HOW THESE PROJECTIONS ARE CALCULATED

The projections come from statistical models fit to historical high school meet results from the western New York region, across many seasons and thousands of athletes. The models learn how an athlete's season in one year relates to their performance the next year. For each event, the model summarizes the season with three numbers:

Season best the fastest time that season · **Season trend** the average direction and rate of change across the season's meets (improving or fading) · **Curvature** whether that change was steady, accelerating, or leveling off

Because the trend and curvature are read from the *sequence* of meets, the order of an athlete's results across the season matters. A **same-event projection** uses the athlete's own history in that event; **cross-event projections** combine two related events (for example, the 200m and 400m to inform the 300m), since sprint and hurdle performances tend to move together. Each model appears as its own row on the event chart with its fit (R^2).

The next-season models are mixed-effects regressions, which account for the fact that athletes develop at different rates. The projected time is the model's central estimate; the expected range reflects the historical spread of next-season results for comparable athletes.

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◉ Short Sprint Specialist (55–100m)

Event	Current Best	Projected Next Season	Expected Range	Historical Fit
55m (indoor)	8.24s	**8.23s**	8.11–8.35s	Strong
55m Hurdles (indoor)	9.66s	**9.58s**	9.34–9.82s	Strong
100m Hurdles (outdoor)	16.17s	**16.14s ★**	15.27–17.02s	Elite (56% improved)

★ Peer estimate — based on athletes at a similar performance level. See individual event pages for details.

SUMMARY

Across all three events, the projections collectively suggest this athlete enters her senior year as an established sprinter-hurdler with a performance profile that is already competitive within her peer group, particularly in the hurdles events. In the 55m, the highest-fit combined model estimates meaningful improvement over her junior-year best, projecting a likely senior range in the 7.98–8.17s window, while the direct model is more conservative. The 100m Hurdles models are notably consistent. The direct, combined, and high-fit cross-event estimates all cluster near 16.0–16.3s, and the elite peer comparison reinforces that range, suggesting a solid but measured improvement is the most grounded expectation. The 55m Hurdles presents the most uncertainty, with a wide spread across models ranging from approximately 8.88s to 9.58s depending on which event inputs are used; the direct and highest-fit combined models suggest a planning range of roughly 9.11–9.82s, while outdoor hurdles-based models indicate the faster end of that window is within the scope of her broader event profile. Taken together, the models paint a picture of an athlete whose hurdles and sprint combination events are her strongest projection anchors, and whose senior season outlook is most reliably framed by the hurdle-specific and combined-event models rather than any single data point.

About these projections: Estimates are based on historical athlete-year transition data from western New York region high school meets and reflect typical development patterns. They do not account for every individual factor (health, training load, weather, race conditions, etc.). These projections are intended as a data-informed starting point for coaching conversations, not as exact predictions. Individual results may vary.

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55m (indoor)

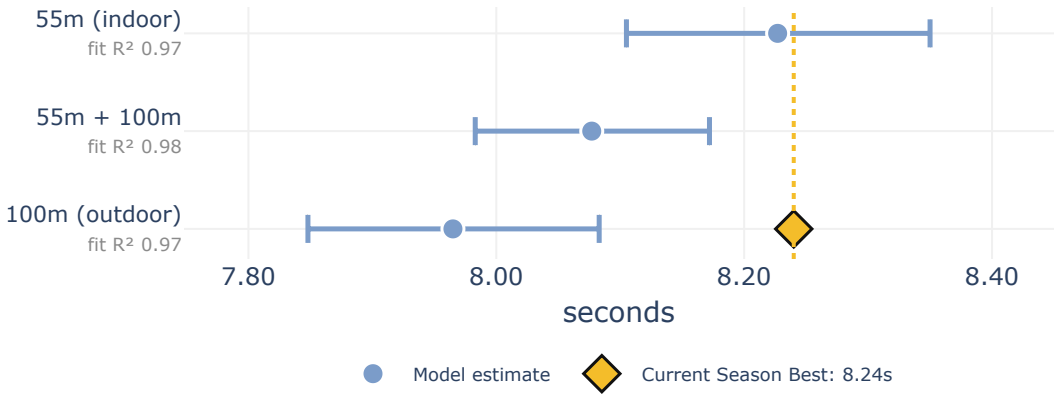
55m (indoor)

Junior → Senior

Historical same-event comparison

PROJECTED BEST	CURRENT SEASON BEST	HISTORICAL FIT
8.23s	**8.24s**	**Strong**
Range: 8.11–8.35s	This season	Based on 1,087 athletes

Model Projections · 55m (indoor)



COACH'S NOTES

The direct same-event model projects a senior-year 55m time of 8.23s (range 8.11–8.35s), which is essentially flat relative to her junior-year best of 8.24s, suggesting modest expected improvement in the event on its own. However, the highest-fit model here is the combined 55m + 100m model ($R^2 = 0.978$), which estimates 8.08s with a range of 7.98–8.17s, meaningfully faster than the direct projection. The 100m-only cross-event model estimates even faster at 7.96s, though its range (7.85–8.08s) overlaps considerably with the combined model. Because the combined 55m + 100m model carries the highest fit and draws on her outdoor sprint profile alongside her indoor performance, it may be more useful to emphasize than the direct same-event model alone, which is the clearest event-specific reference but reflects only indoor 55m history. Overall, the models point in the same direction. the combined and cross-event estimates suggest a likely senior range somewhere in the 7.98–8.17s window, while the direct model sets a more conservative floor around 8.11–8.35s. The spread between the direct model and the highest-fit model warrants some caution, but the general agreement among the stronger-fit models supports viewing improvement beyond the direct projection as a reasonable expectation.

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55m Hurdles (indoor)

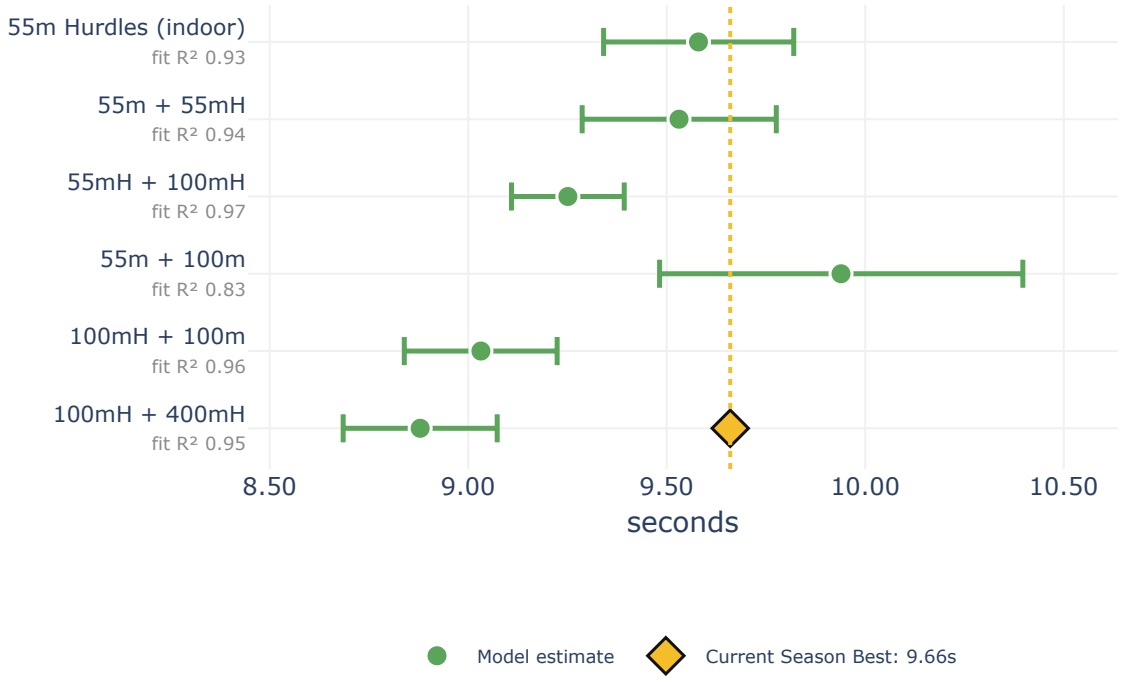
55m Hurdles (indoor)

Junior → Senior

Historical same-event comparison

PROJECTED BEST	CURRENT SEASON BEST	HISTORICAL FIT
9.58s	**9.66s**	**Strong**
Range: 9.34–9.82s	This season	Based on 413 athletes

Model Projections · 55m Hurdles (indoor)



COACH'S NOTES

The 55m Hurdles picture is notably complex, with a wide spread across models that calls for careful interpretation. The direct same-event model projects 9.58s (range 9.34–9.82s), and the combined 55m + 55mH model estimates a similar 9.53s — both suggesting modest improvement from her junior-year best of 9.66s. The highest-fit model is the combined 55mH + 100mH ($R^2 = 0.969$), which estimates a faster 9.25s (range 9.11–9.39s), and several hurdles-specific cross-event models (100mH + 100m (9.03s), 100mH + 400mH (8.88s), and 100m Hurdles alone (9.07s)) estimate outcomes considerably faster still, ranging from roughly 8.88s to 9.07s. These faster estimates are driven by her outdoor hurdles and sprint-hurdle combinations and should be interpreted as related-event estimates rather than direct 55mH projections; they may reflect a broader hurdling profile that the indoor-only direct model does not fully capture. The sprint-only models (55m, 100m) and the 400mH-based model produce slower or wider-ranging estimates and carry lower fit values, so they are less informative here. Given the meaningful disagreement across models, the projection for this event should be treated with caution; a reasonable planning range likely falls somewhere between the direct estimate (~9.34–9.82s) and the highest-fit combined model (~9.11–9.39s), with the understanding that her outdoor hurdles results may indicate potential on the faster end.

Next-Season Projections

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100m Hurdles (outdoor)

Junior → Senior

100m Hurdles (outdoor)

Historical same-event comparison

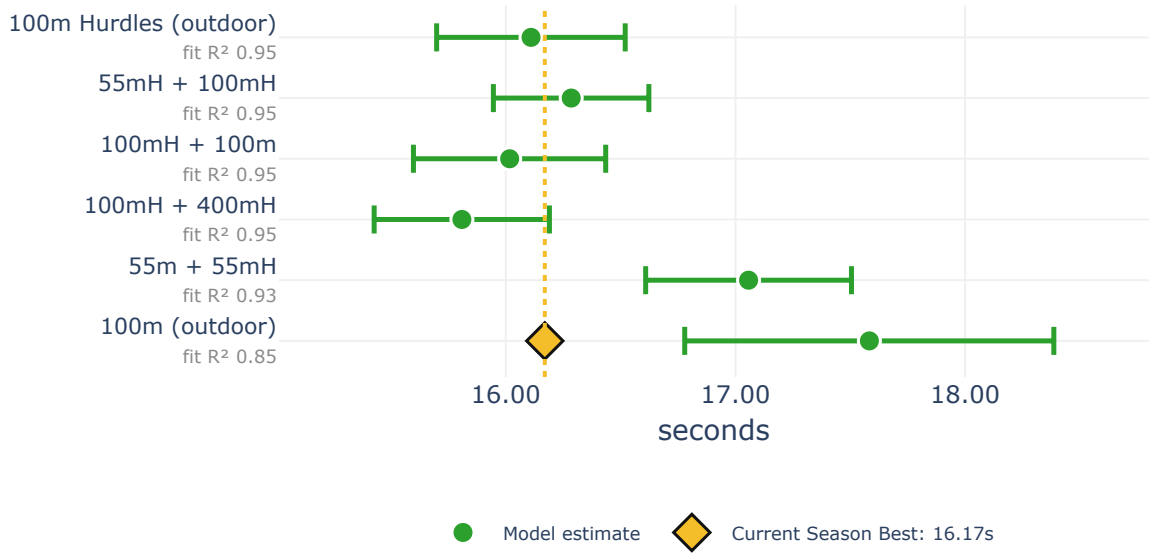
★ **Elite-level estimate** Faster than 671 of 718 Juniors at this event in available data.

PEER ESTIMATE	PEER GROUP	IMPROVED
16.14s	**39**	**56%**
±0.87s typical range	athletes at this level	0.03s faster on average

Based on athletes who ran within ±0.3s of this athlete's current best in available data. Population model shown below for reference.

POPULATION MODEL	CURRENT SEASON BEST	HISTORICAL FIT
16.11s	**16.17s**	**Strong**
Range: 15.70–16.52s	This season	Based on 718 athletes

Model Projections · 100m Hurdles (outdoor)



COACH'S NOTES

For the 100m Hurdles, the direct same-event model and the highest-fit model are closely aligned, which lends reasonable confidence to the overall projection picture. The direct model estimates 16.11s (range 15.70–16.52s, $R^2 = 0.950$), nearly matching her junior-year best of 16.17s, while the highest-fit combined 55mH + 100mH model ($R^2 = 0.954$) estimates 16.29s; slightly slower but with an overlapping range of 15.95–16.62s. The 100mH + 100m model (16.02s, $R^2 = 0.952$) and the 100mH + 400mH model (15.81s, $R^2 = 0.946$) both estimate modestly faster outcomes and carry high fit values, suggesting the direct and combined-event models are fairly consistent in pointing toward a senior range roughly in the 15.70–16.52s window. Lower-fit cross-event models based on the flat sprints or 400mH alone estimate considerably slower (17.02–18.03s) and should carry less weight here. An elite-level peer comparison based on athletes with similar junior-year profiles estimates 16.14s (nearly identical to the direct projection) and notes that 56% of comparable athletes improved, which suggests this athlete may have been performing at a relatively high level within her peer group as a junior, providing helpful context for why the projected improvement appears modest rather than large.

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