



SwimBETTER

CASE STUDY

ATHLETE: CHARLIE HOOVER
AGE: 19
COUNTRY: USA
SPORT: SWIMMING
OCCUPATION: FULL TIME STUDENT
BACKGROUND: NCAA SWIMMER
UNIVERSITY OF MAINE



RESULTS OVER TIME

Charlie started using **eo** SwimBETTER in September 2025. By February 2026, she had swum PBs in every stroke, showing consistent time drops across both sprint and distance.

Freestyle

100yd Free: 53.40 → 51.96
50yd Free: 25:37 → 23:54

Backstroke

200yd Back: 2:06.54 → 2:02.41
100yd Back: 59.58 → 56.92

Butterfly

200yd Fly: 2:13.84 → 2:05.48
100yd Fly: 59.66 → 56.39

IM

200yd IM: 2:08.59 → 2:04.96
100yd IM: 1:01.68 → 58.26

A RECORD-BREAKING SEASON

Charlie's improvements didn't just show up in training – they translated to school records:

4 x University of Maine Records:

- 100 Backstroke
- 200 Backstroke
- 100 IM
- 200 IM

CHARLIE'S APPROACH: MEASURE, ADJUST, RE-MEASURE

By analysing video synced with her force and power data, Charlie identified two key inefficiencies:

- **Backstroke:** A straight arm early in the first half of her stroke was limiting an effective catch and reducing propulsion
- **Freestyle:** Excessive downward force was robbing her speed

With clear, objective insight, they could move away from guesswork and take a deliberate approach to Charlie's training:

- Identify inefficiencies
- Apply targeted drills
- Re-test to confirm improvement

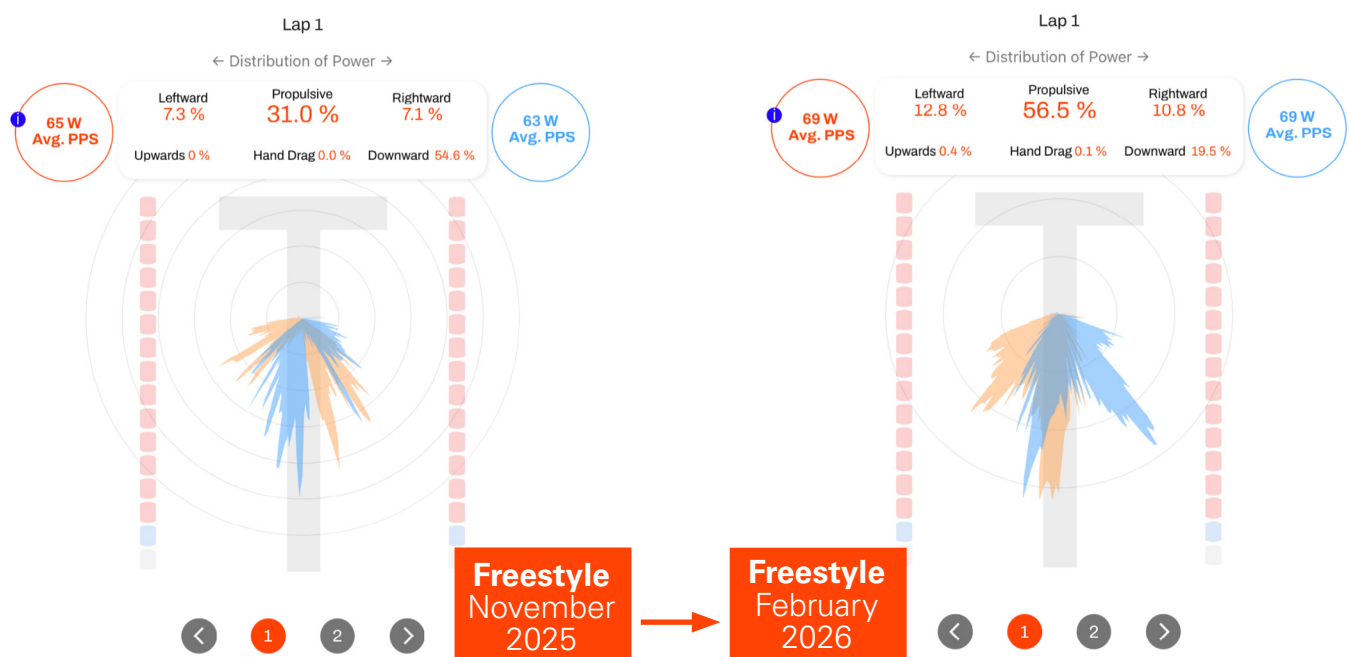
WHAT CHANGED

Force direction

With the inefficiencies identified, Charlie's focus shifted to redirecting force where it matters.

- **Backstroke:** improving the catch allowed force to be applied more effectively toward the feet
- **Freestyle:** reducing downward pressure and establishing an early vertical forearm (EVF) helped direct force backward instead of down

Result: More speed from the same effort.



Fast feedback loop

Every adjustment was tested, not guessed:

- Measure → adjust → retest
- Immediate visibility on what worked
- Continuous refinement

Result: Faster improvement, less wasted training, an engaged athlete.

Targeted drills (with purpose)

Backstroke: Turning lateral force into propulsion

Focus:

- Bend the arm immediately after the catch
- Press water directly toward the feet

Drill: [One-arm backstroke drill](#)

Outcome:

- Reduced lateral force
- Improved catch mechanics
- More effective propulsion through the pull

Freestyle: Eliminate downward force with EVF

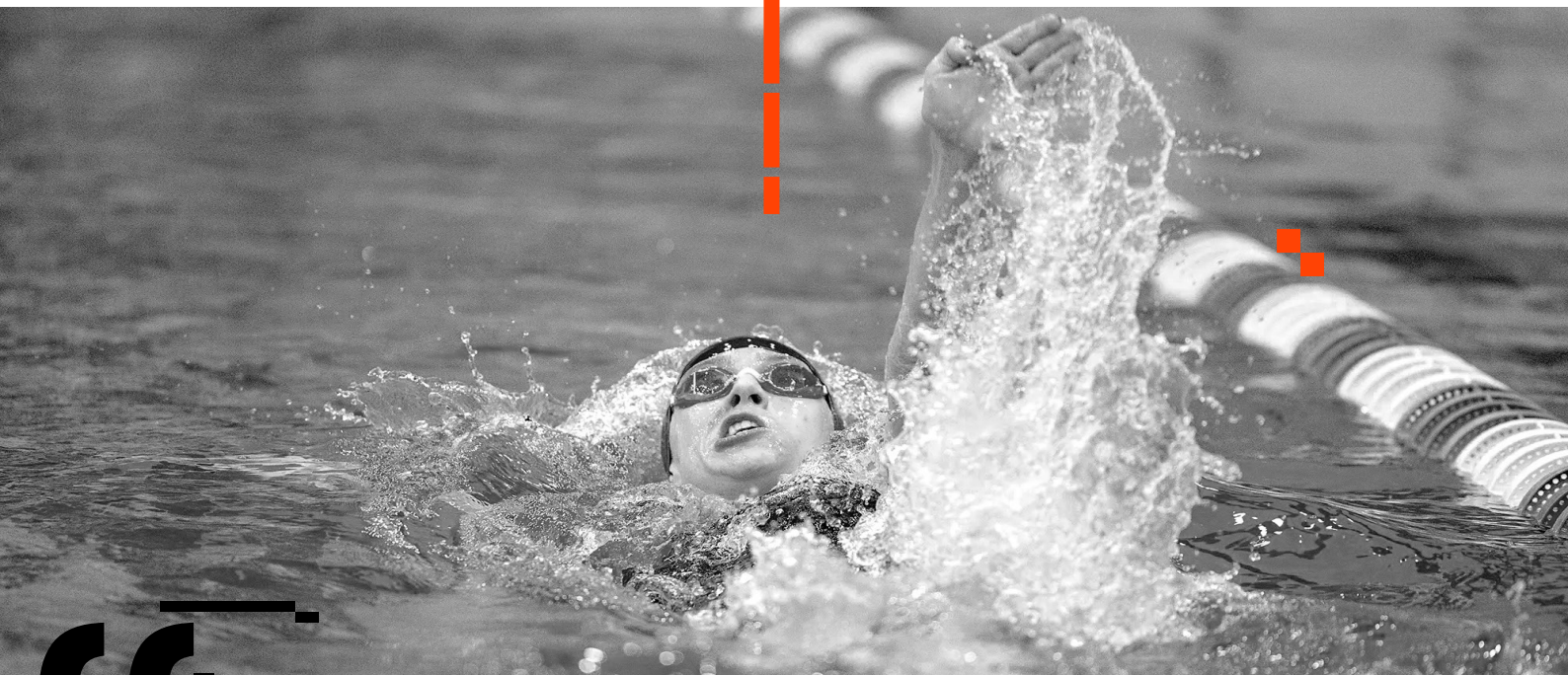
Focus:

- Establish an early vertical forearm (EVF)
- Set the catch before applying force
- Direct force straight back – not down or inward

Drill: [One-arm freestyle with opposite paddle and fin](#)

Outcome:

- Reduced wasted downward force
- Increased propulsive efficiency



No more guessing – hope is NOT a strategy. Using the eo SwimBETTER handsets, I turned data into dominance. Four university records and Team MVP to prove it.

Charlie Hoover, NCAA Swimmer

2025-2026 WOMEN'S MOST VALUABLE SWIMMER

UNIVERSITY OF MAINE, SWIMMING & DIVING