LANTERN MIXED TABLES

Stud Starlight

Seven cards, two directions, one table story.

Lars Rocha

Sixteen pages of play, patterns,
worked hands, and discoveries.

A dedicated WSRF companion.
Your pace. Your possibilities.

DISCOVERIES

Your first invitation

Track high strength and distinct low ranks side by side. A hand that grows in both directions can have a particularly interesting journey.

Seven personal cards supply separate best-five high and low hands. Low qualifies with five distinct ranks from ace through eight. The best qualifying low and high share the pot; high takes the full pot when it is the sole qualifying direction. This room uses fixed increments throughout.

Take your seat with Fern and familiar AI company. The room offers heads-up or six-seat play, automatic next hands, adjustable pace, practice peeks, a visible WSRF tree, a Monte Carlo playground, and a notebook that keeps your place. Choose Gentle company while learning the rhythm, then explore Seasoned or Sharp whenever you feel ready.

Start by naming the game and the legal five-card construction. Then count the players still active and read the amount needed to continue. Those small observations give the coach's estimate a useful setting. The worked pages that follow preserve their cards, assumptions, and numerical receipts so you can explore the same question again.

Can this guide turn a new poker variant into a series of friendly discoveries?

Worked answer. Yes. Begin with one construction, follow one street, and open one explanation. The game's controls keep the legal choices clear while your familiarity grows.

A route through these pages

Read the betting rhythm and the made-hand example. Explore the card map, choose a worked hand, then visit the training page to meet the fitted forest behind the coach.

DISCOVERIES

A rhythm you can follow

The room keeps the chip arithmetic close to the action.

At this table	How it works
Starting stack	2,000 free play chips at each seat
Seats	Heads-up or six seats
Blinds / antes	Ante up to 2 per seat; bring-in up to 5
Betting	Small increment 20; large increment 40.
Street rhythm	20 on third/fourth; 40 on fifth/sixth/seventh
Limit cap	Four full bets per street, including the opening bet.
Short all-ins	A full increment reopens raising under this room's house rule.
Split-chip order	The high half receives an odd split chip. Tied shares award odd chips clockwise from the stored button.

These are the room's declared house settings. A short stack contributes its available chips, and side pots keep each contribution matched to the players eligible for it. A returned unmatched contribution stays separate from a contested pot. Opening the Coach or Options panel holds the action while you explore.

A bring-in can be completed to the full 20-chip small bet. Completing it reopens action to the players who entered below that amount. Fourth street uses the small increment.

> **Can a saved stack keep its meaning after a refill?**
>
> **Worked answer. Yes.** Fresh chips increase the funding total as well as the stack. Recorded hand profit remains the difference earned through play.

DISCOVERIES

See the five-card construction

The cards make the idea concrete.

A ♣ 2 ♣ 3 ♣ 4 ♣ 5 ♣ K ♦ Q ♥

Can the same five clubs make a straight flush for high and a wheel for low?

Worked answer. Yes. The high rules recognize the straight flush, and the ace-to-five low rules recognize the five distinct low ranks. Each direction is evaluated independently, making this a memorable two-way construction.

Seven personal cards offer twenty-one five-card selections. The evaluator chooses the strongest legal high hand, and the split game also finds the best qualifying low. A card outside the final five can still have helped tell the story on an earlier street.

Try covering the worked answer and pointing to the five chosen cards. Then name one different final card that would invite a new construction. A concrete card change is a useful way to connect imagination with the rules.

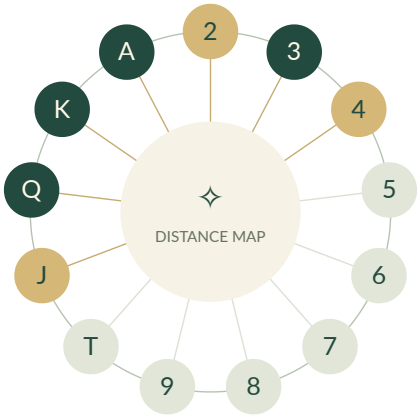
Bring it to the table

At your next decision, name the current made hand before exploring future cards. Your coach can then help connect that construction with the field, the price, and the remaining possibilities.

DISCOVERIES

A little map of possibility

One away, two away, three away—and a clear reference frame.



LIKELY · 7/13 near ranks

Moving references: 3 · K · A · Q

48 unseen cards.
Bucket counts: 14 / 11 / 7 / 16

Distance mean 1.69 · SD 1.46

The pocket map uses your first two dealt cards. In an Omaha hand these are an explicit pair of anchors inside the four-card pocket; the hand evaluator still explores all legal two-card choices. In a stud hand they are the first two private cards. The moving map uses the latest two community cards or your latest two exposed stud cards once they are available.

The map's circular ranks run from 2=0 to A=12. The reference expressions use the two anchors, their sum modulo thirteen, and their absolute difference. Near means distance zero or one. Seven or more near ranks gives LIKELY; six or fewer gives UNLIKELY. Both labels receive balanced examples in each newly trained model.

Known-card counts include your own cards and every publicly exposed card, including cards shown by a folded stud opponent. That keeps the remaining physical-card counts connected to what you can actually observe. The game-specific hand ranking and the map each describe their own part of the hand.

> **Can this compact map help make a WSRF tree's inputs easier to explore?**
>
> **Worked answer. Yes.** The model includes coverage, distance spread, and both zone flags alongside the game-specific card features. A visible tree path shows which of those inputs it used at this spot.

DISCOVERIES

A few habits worth keeping

Let the game's special character guide your attention.

Keep two small descriptions

Describe your current high category, then describe the distinct low ranks available. Those two sentences can coexist. A pair contributes to the high description, while the other cards may supply a developing low. This simple habit keeps the split game readable as new personal cards arrive.

Watch which direction a board suggests

An exposed low board can represent low potential, high potential, or both. Several suited low cards are especially interesting because the same construction can continue in two directions. Use the visible cards as clues and let the showdown sampler explore the remaining possibilities under its stated assumptions.

Choose the best five separately

Stud Eight-or-Better selects the high and low hands independently from the seven personal cards. A high pair can stay in the high selection while five distinct small cards form the low selection. The room reports fractional pot share, so its adviser can represent a scoop, a half, or a smaller tied share.

Let the table keep the rhythm clear

The small bet applies on third and fourth streets, then the big bet begins on fifth. Stud-high's exposed-pair fourth-street option belongs to that separate game; this table keeps fourth street at the small increment. Clear controls let you concentrate on the two constructions growing inside your hand.

WORKED HANDS

Worked hand 1 · Stud 8

Follow the cards, then discover the estimate.

YOUR CARDS

3 ♣ K ♠ 4 ♠

Your exposed cards: 4♠

Street	Opponents	Pot	Call	Made hand
third	1	4	0	High card · Low possibilities ahead

A view of the spot	Value
Moving rank zone	LIKELY · 7/13
WSRF pot share	45.7%
Monte Carlo share	43.8%
95% sampling interval	42.5% – 45.1%
Whole-pot frequency	32.1%
Sample count	4,096

Action	Policy score
Bring in 5	0.001
Complete to 20	-0.329

This independently generated teaching hand preserves your own cards and every exposed card, then samples the remaining cards uniformly. Fractional ties and split pots contribute the share actually earned. The interval describes sampling uncertainty under that model; the forest's estimate is a separate learned prediction.

Compare the action scores with the call price and the active field. They express the explicit betting policy's use of the learned share, rather than a fitted chip-return forecast. Opening a tree lets you follow the card features that helped produce the share estimate.

> **Can the WSRF estimate give this decision a useful starting point?**
>
> **Worked answer. Yes.** It estimates fractional showdown share with a forest trained specifically for Stud 8. The policy connects that estimate with the price, field, and legal choices. Its suggested move here is bring in 5.

Study fixture stud8-1 · 4,096 samples · Independent namespace mixed-guide-independent. Cards, seeds, and measurements are preserved in the study receipt.

WORKED HANDS

Worked hand 2 · Stud 8

Follow the cards, then discover the estimate.

YOUR CARDS

6 ♣ K ♥ J ♥ 4 ♠

Your exposed cards: J♥ · 4♠

Street	Opponents	Pot	Call	Made hand
fourth	5	62	20	High card · Low possibilities ahead

A view of the spot	Value
Moving rank zone	LIKELY · 10/13
WSRF pot share	10.5%
Monte Carlo share	9.5%
95% sampling interval	8.8% – 10.2%
Whole-pot frequency	2.7%
Sample count	4,096

Action	Policy score
Fold	0.000
Call 20	-0.164
Raise to 40	-0.438

This independently generated teaching hand preserves your own cards and every exposed card, then samples the remaining cards uniformly. Fractional ties and split pots contribute the share actually earned. The interval describes sampling uncertainty under that model; the forest's estimate is a separate learned prediction.

Compare the action scores with the call price and the active field. They express the explicit betting policy's use of the learned share, rather than a fitted chip-return forecast. Opening a tree lets you follow the card features that helped produce the share estimate.

> **Can the WSRF estimate give this decision a useful starting point?**
>
> **Worked answer. Yes.** It estimates fractional showdown share with a forest trained specifically for Stud 8. The policy connects that estimate with the price, field, and legal choices. Its suggested move here is fold.

Study fixture stud8-2 · 4,096 samples · Independent namespace mixed-guide-independent. Cards, seeds, and measurements are preserved in the study receipt.

WORKED HANDS

Worked hand 3 · Stud 8

Follow the cards, then discover the estimate.

YOUR CARDS

8 ♠ 4 ♦ T ♦ K ♣ 5 ♦

Your exposed cards: T♦ · K♣ · 5♦

Street	Opponents	Pot	Call	Made hand
fifth	1	14	0	High card · Low possibilities ahead

A view of the spot	Value
Moving rank zone	LIKELY · 11/13
WSRF pot share	40.5%
Monte Carlo share	40.9%
95% sampling interval	39.5% – 42.3%
Whole-pot frequency	33.7%
Sample count	4,096

Action	Policy score
Check	0.005
Bet 40	-0.394

This independently generated teaching hand preserves your own cards and every exposed card, then samples the remaining cards uniformly. Fractional ties and split pots contribute the share actually earned. The interval describes sampling uncertainty under that model; the forest's estimate is a separate learned prediction.

Compare the action scores with the call price and the active field. They express the explicit betting policy's use of the learned share, rather than a fitted chip-return forecast. Opening a tree lets you follow the card features that helped produce the share estimate.

> **Can the WSRF estimate give this decision a useful starting point?**
>
> **Worked answer. Yes.** It estimates fractional showdown share with a forest trained specifically for Stud 8. The policy connects that estimate with the price, field, and legal choices. Its suggested move here is check.

Study fixture stud8-3 · 4,096 samples · Independent namespace mixed-guide-independent. Cards, seeds, and measurements are preserved in the study receipt.

WORKED HANDS

Worked hand 4 · Stud 8

Follow the cards, then discover the estimate.

YOUR CARDS

4 ♥ Q ♥ 4 ♦ 7 ♦ 8 ♦ 2 ♣

Your exposed cards: 4♦ · 7♦ · 8♦ · 2♣

Street	Opponents	Pot	Call	Made hand
sixth	5	82	40	One pair · Low possibilities ahead

A view of the spot	Value
Moving rank zone	UNLIKELY · 6/13
WSRF pot share	14.7%
Monte Carlo share	8.6%
95% sampling interval	7.9% – 9.2%
Whole-pot frequency	0.8%
Sample count	4,096

Action	Policy score
Fold	0.000
Call 40	-0.206
Raise to 80	-0.387

This independently generated teaching hand preserves your own cards and every exposed card, then samples the remaining cards uniformly. Fractional ties and split pots contribute the share actually earned. The interval describes sampling uncertainty under that model; the forest's estimate is a separate learned prediction.

Compare the action scores with the call price and the active field. They express the explicit betting policy's use of the learned share, rather than a fitted chip-return forecast. Opening a tree lets you follow the card features that helped produce the share estimate.

> **Can the WSRF estimate give this decision a useful starting point?**
>
> **Worked answer. Yes.** It estimates fractional showdown share with a forest trained specifically for Stud 8. The policy connects that estimate with the price, field, and legal choices. Its suggested move here is fold.

Study fixture stud8-4 · 4,096 samples · Independent namespace mixed-guide-independent. Cards, seeds, and measurements are preserved in the study receipt.

WORKED HANDS

Worked hand 5 · Stud 8

Follow the cards, then discover the estimate.

YOUR CARDS

2 ♣ T ♥ Q ♣ 6 ♥ T ♣ 8 ♥ J ♦

Your exposed cards: Q♣ · 6♥ · T♣ · 8♥

Street	Opponents	Pot	Call	Made hand
seventh	1	14	0	One pair · Low possibilities ahead

A view of the spot	Value
Moving rank zone	LIKELY · 9/13
WSRF pot share	50.4%
Monte Carlo share	69.2%
95% sampling interval	67.8% – 70.5%
Whole-pot frequency	66.0%
Sample count	4,096

Action	Policy score
Check	0.005
Bet 40	-0.256

This independently generated teaching hand preserves your own cards and every exposed card, then samples the remaining cards uniformly. Fractional ties and split pots contribute the share actually earned. The interval describes sampling uncertainty under that model; the forest's estimate is a separate learned prediction.

Compare the action scores with the call price and the active field. They express the explicit betting policy's use of the learned share, rather than a fitted chip-return forecast. Opening a tree lets you follow the card features that helped produce the share estimate.

> **Can the WSRF estimate give this decision a useful starting point?**
>
> **Worked answer. Yes.** It estimates fractional showdown share with a forest trained specifically for Stud 8. The policy connects that estimate with the price, field, and legal choices. Its suggested move here is check.

Study fixture stud8-5 · 4,096 samples · Independent namespace mixed-guide-independent. Cards, seeds, and measurements are preserved in the study receipt.

WORKED HANDS

Worked hand 6 · Stud 8

Follow the cards, then discover the estimate.

YOUR CARDS

7 ♣ 3 ♠ 6 ♠

Your exposed cards: 6♠

Street	Opponents	Pot	Call	Made hand
third	5	32	20	High card · Low possibilities ahead

A view of the spot	Value
Moving rank zone	LIKELY · 8/13
WSRF pot share	26.0%
Monte Carlo share	23.7%
95% sampling interval	22.7% – 24.6%
Whole-pot frequency	7.2%
Sample count	4,096

Action	Policy score
Fold	0.000
Call 20	-0.150
Raise to 40	-0.234

This independently generated teaching hand preserves your own cards and every exposed card, then samples the remaining cards uniformly. Fractional ties and split pots contribute the share actually earned. The interval describes sampling uncertainty under that model; the forest's estimate is a separate learned prediction.

Compare the action scores with the call price and the active field. They express the explicit betting policy's use of the learned share, rather than a fitted chip-return forecast. Opening a tree lets you follow the card features that helped produce the share estimate.

> **Can the WSRF estimate give this decision a useful starting point?**
>
> **Worked answer. Yes.** It estimates fractional showdown share with a forest trained specifically for Stud 8. The policy connects that estimate with the price, field, and legal choices. Its suggested move here is fold.

Study fixture stud8-6 · 4,096 samples · Independent namespace mixed-guide-independent. Cards, seeds, and measurements are preserved in the study receipt.

PRACTICE

Six discoveries to keep

Affirmative questions, with the reason beside each answer.

Can a 20-chip call into an eligible 80-chip pot break even at a 20% share when betting ends with that call?

Worked answer. Yes. The call adds 20 to the final 100-chip pot. The break-even equation is 20/(80+20)=20%, with rake set to zero.

Can two tied low winners each receive a quarter of a 200-chip pot when one other player wins high alone?

Worked answer. Yes. The high half is 100, the low half is 100, and the two low winners divide that second half into 50 each.

Can 25 near cards among 48 unseen cards give a uniform near-card share of 52.1%?

Worked answer. Yes. Divide the physical near-card count by the unseen-card count. The result describes that bucket event in this worked hand.

Can four times as many independent samples roughly halve the standard error of an estimated mean?

Worked answer. Yes. Standard error scales with the reciprocal of the square root of the sample count. Multiplying the count by four doubles that square root.

Can the coach preserve an opponent's exposed cards after that player folds?

Worked answer. Yes. Those cards remain part of the public known-card set, which keeps the remaining-deck calculation grounded in what you saw.

Can a tree path help you discover which visible feature guided a prediction?

Worked answer. Yes. Follow each comparison from the root to the leaf. The complete forest then combines its tree predictions into the displayed estimate.

TRAINING

Meet your new forest

Actual pytoolzx / WSRF fitting, with the measured results beside it.

Game	Selected fit	Positions	Training showdowns	Test MAE
Stud 8	full	6,144	786,432	4.41 pp

Each game receives 6,144 training positions, with 128 independently sampled showdowns at every position. Six equally represented pools combine opening, middle, and closing play with LIKELY and UNLIKELY moving-map labels. Private and public suit counts, exposed-board strength, and rank geometry give the forest a richer view. The fitted object is pytoolzx.wsrf.WSRFRegressor, and pytoolzx.indexrng.Index supplies independently named seed streams.

Compact and full forests are compared on 768 validation positions. The smaller validation error chooses the serving forest before a fresh 1,536-position test is evaluated. Validation labels use 384 samples; test labels use 512. MAE is the average absolute difference in estimated pot share, expressed here in percentage points.

Game / seats / practice style	Hands	BB / 100	Approx. 95% interval
Stud 8 / 2 / calling	512	63.5	50.4 to 76.7
Stud 8 / 2 / random	512	54.3	29.2 to 79.3
Stud 8 / 2 / selective	512	43.0	24.4 to 61.5
Stud 8 / 6 / calling	1,536	66.4	52.4 to 80.5
Stud 8 / 6 / random	1,536	61.0	37.6 to 84.4
Stud 8 / 6 / selective	1,536	26.3	6.8 to 45.9

The complete-hand benchmark rotates the trained policy through every seat of each fresh deck. Its intervals use deck averages to respect the relationship between seat rotations. These named local practice styles define the scope of the measurements. The full receipt preserves every game, table size, and opponent row.

> **Can opening a tree and reading a receipt make WSRF learning tangible?**
>
> **Worked answer. Yes.** The tree shows how one prediction is reached, while the receipt connects that prediction to the fitted library, independent examples, model choice, and measured matches.

PRACTICE

Make the table your own

A practice path you can enjoy returning to.

Begin with a comfortable rhythm

Choose Gentle company and a relaxed pace. Leave automatic next hands enabled if you enjoy a continuous session, or choose each new hand yourself. The panel controls hold your exact place whenever you open an explanation.

Give one hand a question

Choose a question you can inspect: can this card complete the construction, can this price be expressed as a pot share, or can the tree show which input it used? The worked answer becomes useful when you can point to its reason on the table.

Explore with a practice peek

A peek makes the opposing cards visible for your exercise. The model continues to use its own cards and public observations, so its estimate stays comparable before and after your peek. The notebook marks that hand as practice and preserves the result.

Let the forest take a turn

The WSRF partner option lets the trained adviser play your seat using the explicit betting policy. Pause on a street that interests you and open the tree. Watch mode is a way to explore the model's choices; your own chair is ready whenever you switch back.

Keep a story to return to

Download a notebook from Options. It includes the deal and action sequence needed for exact replay, along with stacks, funding, completed hands, and HUD totals. Restore it in the same game and table size. A saved story can make the next visit feel like a continuation.

> **Can one clear observation make a session worthwhile?**
>
> **Worked answer. Yes.** A price understood, a low hand recognized, or a tree path followed gives you something concrete to bring into the next hand.

REFERENCE

Your pocket reference

Useful terms and a path to the underlying work.

Term	Meaning at these tables
Pot share	The fraction of a contested pot earned, including splits
Scoop	The whole contested pot comes to one player
Bring-in	The opening stud contribution selected by the door-card rule
Completion	Bringing an opening stud contribution to the full small bet
Exposed cards	Cards visible to everyone, retained as known cards
WSRF pool	One of six opening/middle/closing × LIKELY/UNLIKELY groups
Policy score	The explicit action comparison built around the learned equity
Notebook	Your local saved deal, actions, stacks, and history

VPIP counts voluntary entries on the opening street; OR counts opening raises or completions. AF divides bets plus raises by calls. WTSD counts showdowns among hands reaching the first draw street. WSD counts showdowns winning any contested pot, including ties. Read each percentage together with its completed-hand sample count.

Explore the background for this variant in Wikipedia's stud eight-or-better overview. The room's specific stakes, cap, reopening, and odd-chip conventions are declared on page 3. The examples, exercises, UI, and training experiment in this guide are original to Lantern Poker.

Explore the worked-hand receipt, complete-hand match table, and training and reproduction notes. Return to the Stud Starlight table whenever you are ready.

> **Can curiosity connect the guide, the game, and the model?**
>
> **Worked answer. Yes.** A visible card, a reproducible example, and an inspectable tree let you follow the same idea through all three. Keep the question friendly and enjoy the discovery.