Title: Produce an implementation-grade research brief and machine-readable spec for a precise 9 Star Ki calculator

Objective: I need enough accurate, sourced information to build a production-quality web or iOS app that computes a person's full 9 Star Ki profile with no errors. The output must document the system thoroughly, describe calculation algorithms step by step, call out variations found in different schools, and deliver a final data spec plus pseudocode and test cases.

Scope and required outputs: 1) A concise history and taxonomy of 9 Star Ki, including Japanese terms and relationships to the Lo Shu square, the Five Elements, and modern practice. Cite well regarded sources and note that the civil "Nine Star Ki" system aligns to the Chinese solar calendar that starts near Li Chun in early February, not lunar new year. Call out the core components: Honmei star or principal year star, Getsumei star or month star, and the often used third or superficial or energetic star, plus how each is interpreted. Include elemental mapping of numbers 1 through 9 to Water, Wood, Fire, Earth, Metal. 2) Calculation rules that are precise and implementation ready. Provide the canonical formula to compute the principal year star from a Gregorian birth date by reducing the birth year to one digit and subtracting from 11, with the special case that births from January 1 up to about February 3 or 4 use the previous solar year. Include examples for multiple years across centuries to validate the rule, and provide the alternative convention that subtracts from 12 for pre-Feb 4 births. Provide citations for each rule variant. 3) A complete method to compute the month or Getsumei star. Explain that month boundaries follow solar terms and can shift year by year, typically mapping around Feb 4, Mar 6, Apr 5, May 6, Jun 6, Jul 7, Aug 8, Sep 8, Oct 8, Nov 8, Dec 7, Jan 6, but must be verified per almanac. Provide a reliable table for month star calculation and document how to handle dates near a solar term boundary. Include at least one Japanese source that explicitly states the month boundary convention and instruct on verifying with a 万年暦 perpetual calendar. 4) A repeatable method to compute the third or superficial or energetic star, with a clear description of the 81 combination framework derived from Lo Shu permutations or movement tables. Provide either the direct formula or a fully enumerated table and describe how to derive it if a formula is not standardized across schools. 5) Calendar handling rules. State clearly that 9 Star Ki uses the Chinese solar calendar. Specify how to map a Gregorian birth date to the correct solar year and month given Li Chun and subsequent solar terms. Include guidance for time zones and births near midnight UTC where local date may differ. Provide a deterministic algorithm that accepts date, time, and time zone and resolves to the local civil date first, then applies the solar term boundary for that location. Include references that confirm the Feb 4 convention and that months are based on solar terms rather than calendar months. 6) Variations across schools that can affect software outputs. Document the "Chinese method" that applies an ascending correction by gender found in some calculators, and the "traditional" method used widely in Western teaching that does not vary by gender. Provide exact differences, the years affected, and examples. Recommend a default approach and explain how to expose the alternate method as a toggle in software settings. 7) Month star mapping method. Provide a month star look-up table or algorithm for each principal star that does not rely on copyrighted screenshots. If multiple schemes exist, list them, compare, and provide switchable profiles with names we can show in a settings menu. Cite at least one Japanese table and one

English explanation. 8) Daily and hourly stars. Briefly outline how daily and two-hourly cycles are defined in standard practice and whether they are needed for a personal profile feature. Provide references and an explicit recommendation on whether to include them in version one. 9) Data model. Deliver a machine-readable JSON spec that our app can consume. It must include a) element and color metadata for numbers 1 to 9, b) the mapping tables or formulas and constants for principal and month star calculations, c) the 81 combination matrix if required for the third star, d) locale rules for solar term boundaries that we can override by year. 10) Algorithms and pseudocode. Provide clean pseudocode for functions computePrincipalStar(date, tz, method), computeMonthStar(date, tz, method), computeEnergeticStar(principal, month, method). Each must include boundary cases for Feb 3 to Feb 5 and for solar term deviations in specific years. 11) Test plan and golden cases. Provide at least 30 unit test cases that include births on and around Feb 3 and Feb 4 across several decades, across multiple time zones, and across month boundaries such as Mar 5 to Mar 7. Include expected principal, month, and energetic stars under both the default method and the alternate method, and cite the sources you used to validate each expected result. 12) UI and UX notes for transparency. Recommend how to display the method used, show boundary warnings for people born near a solar term shift, and allow users to switch the calculation method. 13) Literature review and expert sources. Compile a short annotated bibliography with links for each item covering foundational descriptions, practical calculation guides, and deeper practitioner content. Include reputable English language overviews and calculators plus at least two Japanese primary sources or almanac style tables. Include books by Robert Sachs and Michio Kushi, practitioner material by Kartar Diamond and Heluo School, and the Wikipedia overview with provenance. Note which are teaching sites vs calculators vs original texts. 14) Accuracy caveats. Clearly state that Nine Star Ki is a traditional divination system. Emphasize that software correctness depends on adopting one calculation convention and handling solar term boundaries accurately. Provide a short “differences you may see” section for end users.

Source targets to review first and extract rules and tables from: 1) The Nine Star Ki overview that ties the system to Lo Shu and the Chinese solar calendar, with star groups and elements. 2) Step by step principal number calculation examples that use the 11 minus reduced year method and the 12 adjustment for pre-Feb 4 births. Gather multiple examples and confirm consistency. 3) Month star boundaries and look-up tables that reference solar terms and caution that month starts vary by year. Include at least one Japanese source with explicit date ranges. 4) Energetic or superficial star derivation through 81 combinations and Lo Shu permutations. If a direct formula is not standardized, deliver the table and the derivation steps. 5) Variations by school, including the “Chinese ascending method” by gender vs the “traditional” uniform method, with a clear comparison and recommendation. 6) Practitioner perspectives and FAQs to cross check terminology such as Honmei, Getsumei, monthly cycles, five element mapping, and the Feb 4 rule. 7) Foundational books and practitioner essays to establish background and terminology.

Deliverables and format: 1) A single research brief in clear English that includes inline citations. 2) An appendix with the final JSON spec and pseudocode blocks. 3) A CSV or JSON file with at least 30 golden test cases and expected outputs. 4) A short changelog noting any conflicting rules across sources and how you resolved them, with citations.

Quality bar and verification: All calculation rules must be demonstrated with at least two independent sources where possible. For solar term boundaries, show how to fetch or embed year specific boundaries and propose a fallback when the exact term time is not available. Where sources disagree, present both, cite both, and recommend a default along with a settings toggle.

Notes on forums and communities: If you find well moderated practitioner communities or schools that document methods transparently, include them as secondary references, but do not rely on unsourced forum claims for algorithmic rules. Prioritize materials that show the underlying tables or derive rules from almanacs. Examples include Mindful Design School articles that teach the 11 minus method with Feb 4 boundary, Heluo School for calendars and day star context, and 9StarKi teaching sites that reveal calculation methods and school differences.

That is the entire prompt. Use only the sources you can verify. If anything remains ambiguous, provide options plus testable implications, not guesses.