

Functional Specification — Videographer Search & Ranking System (v1.5)

Purpose Enable clients searching for any type of videographer to view ranked results based on relevance, reliability, and fairness — not just raw review averages. The system must surface the best-matched professionals for each brief using structured profile data, verified performance metrics, and contextual project cues.

1. Search Flow Overview When a client searches for a specific videography type (e.g. “wedding,” “corporate,” “music video”), the system runs a multi-stage filtering and ranking pipeline before displaying results.

2. Filtering Workflow Stage 1 — Hard Constraints Include only videographers who: - List the searched category in their service types. - Are available on the requested project date/time. - Operate within the client’s location radius or explicitly offer remote service. - Have a price range overlapping the client’s stated budget. Outcome: Narrowed pool of qualified candidates.

Stage 2 — Relevance Analysis (Tag Matching) Measure how well each videographer’s skills and style align with the client’s brief. Extract descriptive tags from the client’s project (e.g. “cinematic,” “product launch,” “outdoor ceremony”). Compare against portfolio tags (auto-extracted from past projects) and profile tags (declared skills, styles, niches). Compute a Tag Similarity Score (0–100%) using semantic or cosine similarity. Outcome: Quantified project relevance per candidate.

Stage 3 — Reliability Weighting (Wilson Score) Apply a Wilson-score or equivalent interval to normalise review data. Reward consistency and volume; reduce the influence of small sample sizes. Outcome: Confidence-weighted reliability value.

3. Final Ranking Computation $\text{Final_Score} = (\text{Tag_Similarity} \times 0.70) + (\text{Reliability_Score} \times 0.30)$
Outcome: Unified, sortable ranking list for the client’s chosen category.

4. Client-Facing Output Each result displays: Videographer, Tag Match, Reliability, Price Range.
Example: Studio Alpha — 92%, 4.9/5, £1.5k–£4k Urban Media — 88%, 4.7/5, £1k–£3k

UX Requirements - Show reasoning (“Best balance of relevance and reliability”). - Sorting modes: Best Match / Top Rated / Most Affordable. - Use intuitive visual indicators (bars, badges, etc.).

5. Integrity & Anti-Gaming Mechanisms - Review Validation: weight by count \times verified status. - Tag Verification: auto-audit tags against portfolio content. - Price Transparency: enforce $\leq 2.5\times$ spread between min/max rates. - Audit Logs: capture review/tag edits and anomalies.

6. Edge Case Handling New Videographers - Eligible if Tag Similarity $\geq 90\%$. - Display “Rising Talent” badge when < 3 verified reviews. Ties: total reviews \rightarrow join date \rightarrow alphabetical.

7. Client Customization Modes - Best Match (default): Tag + Reliability (70/30) - Most Affordable: Price ascending - Top Rated: Reliability only

8. System Goals Fair, transparent, category-agnostic ranking. Encourage genuine quality over rating manipulation. Keep weighting logic opaque to end users.

9. Implementation Guidance Data model includes: category, availability, location, price_range, tags, reviews, reliability_score. Modular scoring logic (weights configurable per A/B test). Tag-extraction pipeline for briefs and portfolios. Logging & anomaly monitoring. UI displays tag match %, reliability %, and price clearly.

10. Success Metrics Top-3 matches accurate $\geq 90\%$ Fraudulent review submissions $< 5\%$ Client satisfaction $\geq 4.5/5$

11. Next Steps Confirm schema fields and API contracts. Define interfaces for tag extraction and review scoring. Build prototype with test dataset. Run closed beta; gather QA metrics. Tune weight ratios based on empirical results.

12. Data Schema (Minimum Fields) id, name, categories, availability, location, price_range, portfolio_tags, profile_tags, reviews, reliability_score, join_date, status

13. Module Interfaces Tag Extraction: input (brief, portfolio) \rightarrow output (tag array) Reliability: input (reviews) \rightarrow output (reliability_score) Ranking: input (tag_similarity, reliability_score) \rightarrow output (final_score, ranked list)

14. Fallback Logic — No Direct Matches Found When zero videographers meet all hard constraints, the system widens search filters step-by-step instead of showing an empty result.

Stage 1 — Relax Availability If no matches are found, include videographers available ± 7 days from the requested date. Outcome: Keeps temporally flexible options visible.

Stage 2 — Expand Location Radius Expand the search radius in 25km increments up to 200km total. Include remote or hybrid videographers. Outcome: Surfaces the nearest viable professionals.

Stage 3 — Relax Budget Overlap Allow $\pm 20\%$ deviation outside the client's stated budget. Flag with: "Slightly above your budget — based on project fit." Outcome: Avoids false negatives from minor price gaps.

Stage 4 — Show Related Categories Suggest videographers from related subcategories (e.g. event, promotional, documentary). Use semantic category similarity to infer relationships. Outcome: Offers close alternatives rather than dead ends.

Stage 5 — Notify and Capture Intent If still no matches, display: "No exact matches found. Would you like us to alert matching videographers and notify you when one becomes available?" Enable optional alert creation via push/email. Outcome: Captures unmet demand and maintains engagement.

Ranking Within Fallback Results $\text{Fallback_Score} = (\text{Distance_Factor} \times 0.4) + (\text{Final_Score} \times 0.6)$
Where Distance_Factor = inverse-normalized proximity (nearest = 1.0, farthest = 0.0). Outcome: Ensures nearest and best-qualified fallback options appear first.