

Guidance on Personal Data in Generative Music Systems

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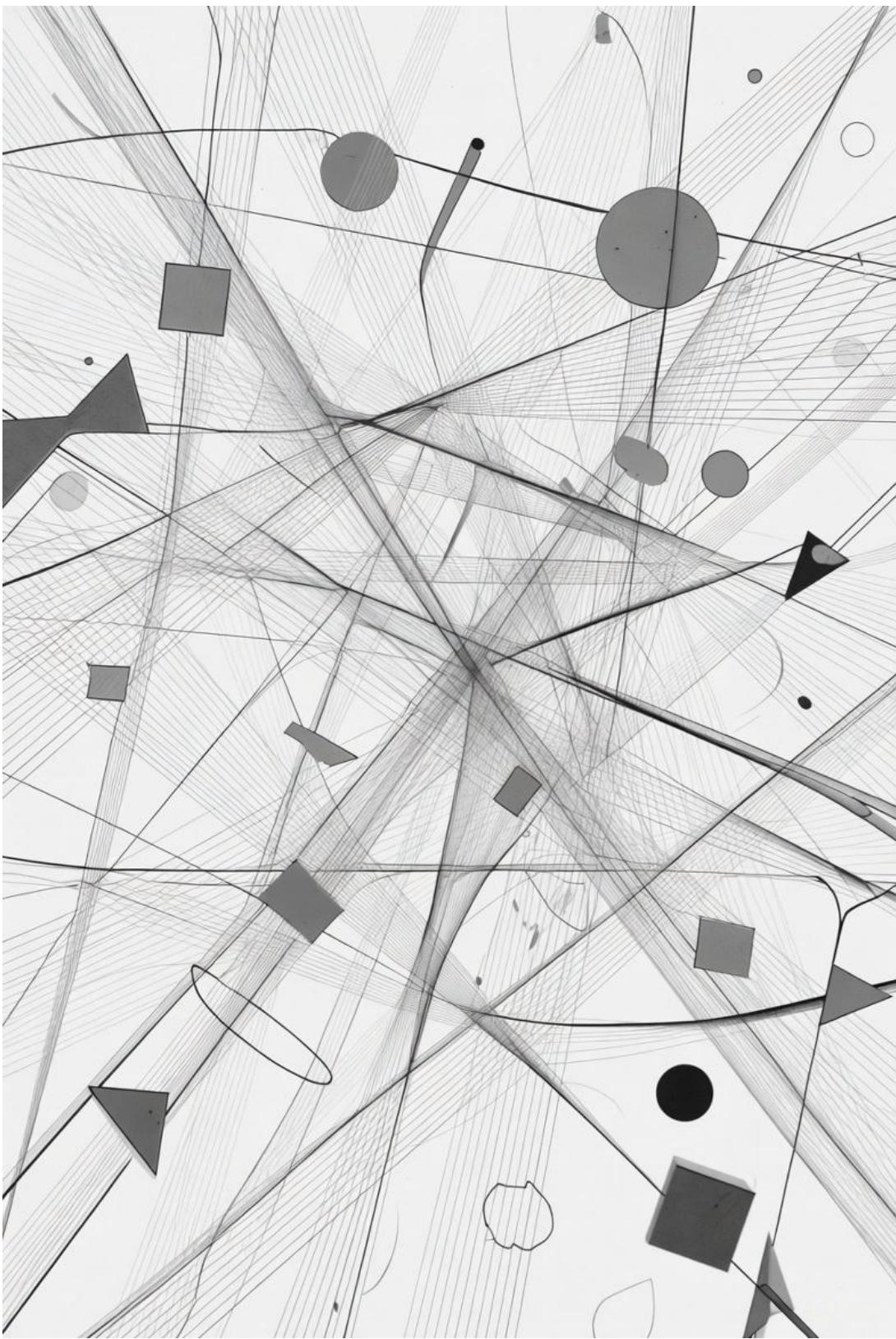
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Flow Description

Guidance on Personal Data
in Generative Music Systems



Open-Source
Science Guidance
for AI Music Generation Tools
Version 1.0 | Dec 2025
Prepared by: Petra Kühnle

1. Purpose and Scope

This guidance applies to all generative music models that:

- Accept user-uploaded audio (voice, instrument, full tracks)
 - Use such uploads for training, fine-tuning, or inference
 - Generate new musical output for end users
-

2. Document Control

Version	Date	Author	Editor	Summary of changes
1.0	Dec 2025	Petra Kühnle	Petra Kühnle	Initial release

3. Normative References

- [Regulation \(EU\) 2016/679 \(GDPR\)](#)
 - [Regulation \(EU\) 2024/1689 \(EU AI Act\) – high-risk AI systems](#)
 - [ICO Guidance on AI and Data Protection \(2023–2025\)](#)
 - [ENISA “Securing Machine Learning Algorithms” \(2021\)](#)
 - Directive (EU) 2019/882 (European Accessibility Act) – requirements for accessible digital products and services: <https://eur-lex.europa.eu/eli/dir/2019/882/oj>
-
- **WCAG 2.2 (Web Content Accessibility Guidelines) – Level AA standards for web and document accessibility: <https://www.w3.org/TR/WCAG22/>**

4. Definitions

Term	Definition
Training Data Opt-In	Explicit, granular, and withdrawable consent to use uploaded audio for model training
Voice Biometric Data	Special-category personal data under Art. 9 GDPR
Style Leakage	Unintended reproduction of an individual artist’s recognizable style in outputs

5. Mandatory Requirements

5.1 Lawful Basis and Consent Architecture

Req ID	Requirement	Implementation Notes
LB-01	Explicit consent required for any training use	Default OFF, separate checkbox
LB-02	Consent withdrawal must trigger data deletion pipeline	One-click “Remove my data” button
LB-03	No bundling of training consent with service access	Freely given (Recital 43)

5.2 Transparency Obligations

Req ID	Requirement
TR-01	Privacy notice at point of upload (layered notice)
TR-02	Inform users if outputs may contain traces of others' data
TR-03	Provide high-level explanation of how the model works

5.3 Data Protection by Design

Req ID	Requirement
DP-01	End-to-end encryption of raw uploads
DP-02	Automatic deletion of raw audio after 30 days unless opted-in for longer retention
DP-03	Training-data anonymization where technically feasible

5.4 Fairness and Bias Mitigation

Req ID	Requirement
FB-01	Document demographic/genre distribution of training data
FB-02	Annual bias audit of generated outputs

5.5 Data Subject Rights Pipeline

Req ID	Maximum Response Time	Technical Implementation
Access (Art. 15)	30 days	Download raw + embeddings
Erasure (Art. 17)	Immediate	Delete + model unlearning (best effort)
Objection (Art. 21)	Immediate	Block future use

6. Data Protection Impact Assessment (DPIA)

Mandatory pre-deployment DPIA template available in Appendix A.

7. Record of Processing Activities (Art. 30)

Tracked in GitHub: [Music AI Vault Repository](#)

Appendix A – DPIA Template

Version 1.0 – December 2025 | Prepared by: Petra Kühnle

This template meets Art. 35 GDPR for high-risk AI under EU AI Act. Complete pre-deployment for models handling personal data (e.g., voice biometrics). Reference guidance (e.g., 5.1 Lawful Basis). Consult DPO; escalate unmitigated risks to authority (e.g., ICO).

1. Project/Processing Overview

- **Project Name:** [Insert]
- **Department/Owner:** [Insert]
- **Date of DPIA:** [Insert]
- **Purpose:** [Describe]
- **Stakeholders:** [List]
- **Scope:** [Per Section 1]
- **High-Risk Classification:** [Explain, e.g., Art. 9 special data]

2. Processing Activities Description

Per Art. 35(7)(a).

- **Personal Data Categories:** [List; ref. Section 4]
- **Data Subjects:** [List]
- **Data Sources:** [e.g., Opt-in uploads]
- **Operations:** [Describe flows]
- **Recipients/Sharing:** [List]
- **Transfers:** [Yes/No; safeguards]
- **Retention:** [e.g., Per DP-02]
- **Automated Decisions:** [Describe]

3. Necessity/Proportionality

Per Art. 35(7)(b).

- **Lawful Basis:** [Justify; ref. 5.1]
- **Necessity:** [Explain]
- **Proportionality:** [Assess]
- **Alternatives:** [List]

4. Risk Identification/Assessment

Per Art. 35(7)(c). Use matrix (Likelihood x Impact).

- **Risks:** [e.g., Privacy, bias (FB-01), style leakage]
- **Likelihood/Impact:** [Rate]
- **Affected Rights:** [e.g., GDPR rights]

5. Mitigations/Safeguards

Per Art. 35(7)(d).

- **Technical:** [e.g., DP-01 encryption]
- **Organizational:** [e.g., FB-02 audits]
- **Transparency:** [e.g., TR-01 notices]
- **Rights Support:** [Ref. 5.5]
- **Residual Risks:** [Reassess]
- **Monitoring:** [Plan]

6. Consultation

- **Internal:** [Describe]
- **External:** [If needed]
- **Data Subjects:** [Optional]

7. Conclusions/Recommendations

- **Assessment:** [Summarize]
- **Action Plan:** [List]
- **Review Triggers:** [List]

8. Sign-Off

- **DPO:** Name/Signature: _____ Date: _____
- **Owner:** Name/Signature: _____ Date: _____
- **Management:** Name/Signature: _____ Date: _____

Annexes (Optional): Flows, matrix, consultations, links to B/C.

Maintain living; review annually. Store per Section 7. Adapt for non-EU (e.g., CCPA). Ref: ICO Guidance (2023–2025), ENISA (2021).

Appendix B – Model Card Template for Music Models

Model Card Template for Music Models | Version 1.0 – December 2025 | Prepared by: Petra Kühnle

Document for transparency/compliance. Complete per model; maintain with Section 7.

1. Model Details

- **Basic Info:** Name/Version/Date/Developers/License/Contact
- **Description:** [Architecture, I/O, capabilities]
- **Resources:** [Compute, carbon estimate]

2. Intended Use

- **Primary:** [Compliant scenarios]
- **Out-of-Scope:** [Prohibited, e.g., no DPIA]

3. Factors

- **Relevant:** [e.g., Bias in genres/demographics]
- **Mitigations:** [Ref. FB-01/02]

4. Evaluation

- **Metrics:** [e.g., FAD, leakage rate]
- **Data:** [Datasets, diversity]
- **Results:** [Summarize]
- **Ethics:** [e.g., Consent-based data]

5. Ethical Considerations/Risks

- **Fairness/Bias:** [Risks/mitigations]
- **Privacy:** [Risks/mitigations, e.g., DP-01/02]
- **Transparency:** [Per TR-03]
- **Other:** [e.g., Misuse]

6. Training Data

- **Sources:** [e.g., Opt-in]
- **Preprocessing:** [e.g., Anonymization]
- **Composition:** [Breakdown; ref. FB-01]
- **Controls:** [Per LB-01–03]

7. Recommendations

- **Deployers:** [e.g., DPIA]
- **Users:** [e.g., Notices]
- **Maintenance:** [Updates]

8. Glossary

[Terms from Section 4]

9. References

[From Section 3]

Update on changes.

Acknowledgments

Cover image generated by Grok with author's original prompt. Content research accelerated by Grok from public web sources.

Appendix C – Consent Withdrawal Flow Diagram

Consent Withdrawal Flow Diagram | Version 1.0 – December 2025 | Prepared by:
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Process per LB-02, Arts. 17/21 GDPR. Meets Section 5.5 response times.

Flow Description

1. **User Action:** User clicks “Remove My Data” button
2. **Confirmation:** System prompts for confirmation
 - If **No** → Process ends
 - If **Yes** → Proceed to deletion pipeline
3. **Deletion Pipeline:**
 - Delete raw audio (per DP-01/02)
 - Remove embeddings from system
 - Trigger model unlearning (best effort)
 - Block future use (Art. 21)
4. **Confirmation:** Send email confirmation to user
5. **Logging:** Record action per Art. 30
6. **Complete:** Process ends

Visual Flowchart: The Mermaid diagram code below generates an interactive flowchart in digital formats. In PDF exports, refer to the flow description above.

```
graph TD
    A["User Clicks 'Remove My Data'"] --> B{Confirm?}
    B -- Yes --> C["Deletion Pipeline"]
    B -- No --> D["End"]
    C --> E["Delete Raw Audio DP-01/02"]
    C --> F["Remove Embeddings"]
    C --> G["Unlearning Best Effort"]
    C --> F
    F --> G
    G --> H["Block Use Art. 21"]
    H --> I["Email Confirmation"]
    I --> J["Log Art. 30"]
    J --> K["End"]
```