

Question 1, 3, 4

```
SELECT p.title AS podcast_title,
       s2.id AS segment_id,
       s2.content,
       s2.start_time,
       s2.end_time,
       (s1.embedding <-> s2.embedding) AS distance
FROM segment AS s1
JOIN segment AS s2 ON s2.id <> s1.id
JOIN podcast AS p ON p.id = s2.podcast_id
WHERE s1.id = %s
ORDER BY distance ASC
LIMIT 5;
```

Question 2

```
SELECT p.title AS podcast_title,
       s2.id AS segment_id,
       s2.content,
       s2.start_time,
       s2.end_time,
       (s1.embedding <-> s2.embedding) AS distance
FROM segment AS s1
JOIN segment AS s2 ON s2.id <> s1.id
JOIN podcast AS p ON p.id = s2.podcast_id
WHERE s1.id = %s
ORDER BY distance DESC
LIMIT 5;
```

Question 5

```
WITH episode_centroids AS (
    SELECT podcast_id, AVG(embedding) AS centroid
    FROM segment
    GROUP BY podcast_id
),
query_segment AS (
    SELECT s.embedding, s.podcast_id
    FROM segment s
    WHERE s.id = %s
)
SELECT p.title,
       (qs.embedding <-> ec.centroid) AS distance
FROM query_segment AS qs
JOIN episode_centroids AS ec ON ec.podcast_id <> qs.podcast_id
JOIN podcast AS p ON p.id = ec.podcast_id
ORDER BY distance ASC
LIMIT 5;
```

Question 6

```
WITH episode_centroids AS (
    SELECT podcast_id, AVG(embedding) AS centroid
    FROM segment
    GROUP BY podcast_id
),
query_segment AS (
    SELECT ec.centroid
    FROM episode_centroids AS ec
    WHERE ec.podcast_id = %s
)
SELECT p.title,
       (qs.centroid <-> ec.centroid) AS distance
FROM query_segment AS qs
JOIN episode_centroids AS ec ON ec.podcast_id <> %s
JOIN podcast AS p ON p.id = ec.podcast_id
```

ORDER BY distance ASC
LIMIT 5;

=== Q1: 5 most similar to 267:476 ===

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+-----+-----+
+-----+-----+
| podcast_title
| segment_id | content
start_time | end_time | distance |
|-----|
+-----+-----+
+-----+-----+
| Podcast: Ryan Graves: UFOs, Fighter Jets, and Aliens | Lex Fridman Podcast
#308 | 113:2792 | encounters, human beings, if
we were to meet another alien | 6725.620000 | 6729.860000 | 0.648345 |
| Podcast: Richard Dawkins: Evolution, Intelligence, Simulation, and Memes | Lex
Fridman Podcast #87 | 268:1019 | Suppose we did meet an alien
from outer space | 2900.040000 | 2903.080000 | 0.655811 |
| Podcast: Jeffrey Shainline: Neuromorphic Computing and Optoelectronic
Intelligence | Lex Fridman Podcast #225 | 305:3600 | but if we think of
alien civilizations out there | 9479.960000 | 9484.040000 |
0.659543 |
| Podcast: Michio Kaku: Future of Humans, Aliens, Space Travel & Physics | Lex
Fridman Podcast #45 | 18:464 | So I think when we meet alien
life from outer space, | 1316.860000 | 1319.580000 | 0.666203 |
| Podcast: Alien Debate: Sara Walker and Lee Cronin | Lex Fridman Podcast #279
| 71:989 | because if aliens come to us |
2342.340000 | 2343.620000 | 0.674294 |
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```

=== Q2: 5 most dissimilar to 267:476 ===

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+-----+-----+
+-----+-----+
+-----+-----+
| podcast_title
| segment_id | content
start_time | end_time | distance |
|-----|
+-----+-----+
+-----+-----+
| Podcast: Jason Calacanis: Startups, Angel Investing, Capitalism, and
Friendship | Lex Fridman Podcast #161 | 119:218 | a 73 Mustang Grande in
gold? | 519.960000 | 523.800000 | 1.615769 |
| Podcast: Rana el Kaliouby: Emotion AI, Social Robots, and Self-Driving Cars |
Lex Fridman Podcast #322 | 133:2006 | for 94 car models.
| 5818.620000 | 5820.820000 | 1.586336 |
| Podcast: Travis Stevens: Judo, Olympics, and Mental Toughness | Lex Fridman
Podcast #223 | 283:1488 | when I called down to get the
sauna. | 3709.340000 | 3711.100000 | 1.572553 |
| Podcast: Jeremy Howard: fast.ai Deep Learning Courses and Research | Lex
Fridman Podcast #35 | 241:1436 | which has all the courses
pre-installed. | 4068.900000 | 4071.140000 | 1.566332 |
| Podcast: Joscha Bach: Nature of Reality, Dreams, and Consciousness | Lex
Fridman Podcast #212 | 307:3933 | and very few are first class
and some are budget. | 10648.640000 | 10650.960000 | 1.561634 |
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| Podcast: George Hotz: Hacking the Simulation & Learning to Drive with Neural
Nets | Lex Fridman Podcast #132 | 308:144 | I mean, we don't understand
dark energy, right? | 500.440000 | 502.600000 | 0.668197 |
| Podcast: Lex Fridman: Ask Me Anything - AMA January 2021 | Lex Fridman Podcast
| 243:273 | Like, what's up with this dark matter and dark energy stuff? |
946.220000 | 950.120000 | 0.735551 |
| Podcast: Katherine de Kleer: Planets, Moons, Asteroids & Life in Our Solar
System | Lex Fridman Podcast #184 | 196:685 | being like, what the hell is
dark matter and dark energy? | 2591.720000 | 2595.960000 | 0.763114 |
| Podcast: Alex Filippenko: Supernovae, Dark Energy, Aliens & the Expanding
Universe | Lex Fridman Podcast #137 | 51:36 | Do we have any
understanding of what the heck that thing is? | 216.000000 | 219.000000 |
0.792202 |
| Podcast: Leonard Susskind: Quantum Mechanics, String Theory and Black Holes |
Lex Fridman Podcast #41 | 122:831 | That is a big question in
physics right now. | 2374.900000 | 2377.620000 | 0.802270 |
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=== Q5a: 5 episodes similar to segment 267:476 ===

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+-----+-----
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| title
| distance |
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| Podcast: Sara Walker: The Origin of Life on Earth and Alien Worlds | Lex
Fridman Podcast #198 | 0.782898 |
| Podcast: Martin Rees: Black Holes, Alien Life, Dark Matter, and the Big Bang |
Lex Fridman Podcast #305 | 0.787950 |
| Podcast: Max Tegmark: Life 3.0 | Lex Fridman Podcast #1
| 0.788690 |
| Podcast: Sean Carroll: The Nature of the Universe, Life, and Intelligence |
Lex Fridman Podcast #26 | 0.789065 |
| Podcast: Nick Bostrom: Simulation and Superintelligence | Lex Fridman Podcast
#83 | 0.791121 |
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=== Q5b: 5 episodes similar to segment 48:511 ===

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-----+-----+
| title
| distance |
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+-----+-----|
| Podcast: Christof Koch: Consciousness | Lex Fridman Podcast #2
| 0.753780 |
| Podcast: Dileep George: Brain-Inspired AI | Lex Fridman Podcast #115
| 0.760515 |
| Podcast: Tomaso Poggio: Brains, Minds, and Machines | Lex Fridman Podcast #13
| 0.761555 |
| Podcast: Elon Musk: Neuralink, AI, Autopilot, and the Pale Blue Dot | Lex
Fridman Podcast #49 | 0.776152 |
| Podcast: Philip Goff: Consciousness, Panpsychism, and the Philosophy of Mind |
Lex Fridman Podcast #261 | 0.787206 |
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=== Q5c: 5 episodes similar to segment 51:56 ===

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| title
| distance |
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| Podcast: Sean Carroll: Quantum Mechanics and the Many-Worlds Interpretation |
Lex Fridman Podcast #47 | 0.776714 |
| Podcast: Stephen Wolfram: Fundamental Theory of Physics, Life, and the
Universe | Lex Fridman Podcast #124 | 0.808071 |
| Podcast: Donald Hoffman: Reality is an Illusion - How Evolution Hid the Truth
| Lex Fridman Podcast #293 | 0.816583 |
| Podcast: Cumrun Vafa: String Theory | Lex Fridman Podcast #204
| 0.817347 |
| Podcast: Avi Loeb: Aliens, Black Holes, and the Mystery of the Oumuamua | Lex
Fridman Podcast #154 | 0.825452 |
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=== Q6: 5 episodes similar to episode VeH7qKZr0WI ===

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| title
| distance |
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| Podcast: Tyler Cowen: Economic Growth & the Fight Against Conformity &
Mediocrity | Lex Fridman Podcast #174 | 0.119501 |
| Podcast: Eric Weinstein: Difficult Conversations, Freedom of Speech, and
Physics | Lex Fridman Podcast #163 | 0.125714 |
| Podcast: Michael Malice and Yaron Brook: Ayn Rand, Human Nature, and Anarchy |
Lex Fridman Podcast #178 | 0.128427 |
| Podcast: Steve Keen: Marxism, Capitalism, and Economics | Lex Fridman Podcast
#303 | 0.129163 |
| Podcast: Michael Malice: The White Pill, Freedom, Hope, and Happiness Amidst
Chaos | Lex Fridman Podcast #150 | 0.130409 |
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