Comparison: OpenAI Embeddings vs MongoDB Atlas Vector Search

1. What Are They?

OpenAI Embeddings:
- API service (AI Model)
- Converts text to vector representations (semantic embeddings)
- Used in semantic search, recommendations, etc.

MongoDB Atlas Vector Search:
- Feature in MongoDB Atlas (paid tiers only)
- Enables vector similarity search over stored documents
- Used in AI-powered search applications

2. Features Comparison

- OpenAI generates embeddings, MongoDB stores and searches them.
- OpenAI has no search capability; MongoDB does.
- MongoDB supports cosine, dot product, and Euclidean similarity.
- MongoDB integrates indexing and filtering into queries.

3. Pricing Comparison

OpenAI:
- $0.0001 per 1,000 tokens (text-embedding-ada-002)
- Free credits available for new accounts (~$5-$18, expire in 3 months)
- Pay-as-you-go billing

MongoDB Atlas Vector Search:
- Requires M10 or higher cluster (~$40/month and up)
- Vector Search is free once on M10+
- No free access to vector search in free/shared tiers (M0-M5)

4. Useful Links

OpenAI Embeddings Guide:
https://platform.openai.com/docs/guides/embeddings

MongoDB Vector Search Docs:
https://www.mongodb.com/docs/atlas/atlas-search/vector-search/

OpenAI Pricing:

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https://openai.com/pricing

MongoDB Atlas Pricing:
https://www.mongodb.com/cloud/atlas/pricing

5. Summary

Use OpenAI to generate embeddings.

Use MongoDB Atlas (M10+) to store and perform semantic/vector search.

Together, they make a powerful AI-backed search stack.