FILTER OPERATIONS

1 Find Unexpected Audience Hits

(Poor critic ratings but high audience scores)

```
db.movies.find({
  $and: [
    { "metacritic": { $lt: 50 } },
    { "imdb.rating": { $gt: 7.5 } }
  ]
})
```

```
> db.movies.find({ $and: [{ "cast": { $exists: true } }, { $expr: { $gt: [{ $size: "$genres" }, 2] } }, { "imdb.rating": { $gt: 7.5 } }] })
< {
    _id: ObjectId('573a1391f29313caabcd70b4'),
    plot: 'An extended family split up in France and Germany find themselves on opposing sides of the battlefield during World War I.',
    genres: [
      'Drama',
      'Romance',
      'War'
    ],
    runtime: 150,
    rated: 'PASSED',
    cast: [
      'Pomeroy Cannon',
      'Josef Swickard',
      'Bridgetta Clark',
      'Rudolph Valentino'
    ],
    num_mflix_comments: 1,
    poster: 'https://m.media-amazon.com/images/M/MV5BOTU1ODQyYTctODhkNy00YWRmLWE2YzYtMTQ5ZjA3OTNiN2QyXkEyXkFqcGdeQXVyMzE0MjY5ODA@._V1_SY1000
    title: 'The Four Horsemen of the Apocalypse',
    fullplot: 'Julio Madariaga is the Argentine patriarch of a wealthy family. He has two daughters, the elder wed to a Frenchman and the ot
    countries: [
      'USA'
```

```
    released: 1923-03-31T00:00:00.000Z,
    directors: [
      'Rex Ingram'
    ],
    writers: [
      'Vicente Blasco Ibèèez (novel)',
      'June Mathis (written for the screen by)'
    ],
    awards: {
      wins: 1,
      nominations: 0,
      text: '1 win.'
    },
    lastupdated: '2015-08-24 00:59:30.430000000',
    year: 1921,
    imdb: {
      rating: 7.9,
      votes: 2475,
      id: 12190
    },
    type: 'movie',
    tomatoes: {
      viewer: {
        rating: 3.9,
```

```
        numReviews: 507,
        meter: 76
      },
      production: 'Metro Pictures Corporation',
      lastUpdated: 2015-07-28T18:34:16.000Z
    }
}
{
  _id: ObjectId('573a1391f29313caabcd7626'),
  plot: 'A nobleman becomes the vigilante Robin Hood who protects the oppressed English people from the tyrannical Prince John.',
  genres: [
    'Adventure',
    'Romance',
    'Family'
  ],
  runtime: 143,
  cast: [
    'Wallace Beery',
    'Sam De Grasse',
    'Enid Bennett',
    'Paul Dickey'
  ],
  num_mflix_comments: 0,
  poster: 'https://m.media-amazon.com/images/M/MV5BYzRmMWIyNDEtYTRmYS00Y2FlLWJhOGUtYWZmNTI1YzZjOTc2L2ltYWdlL2ltYWdlXkEyXkFqcGdeQXVyMjUxODE
  title: 'Robin Hood',
```

```
  ],
  type: 'movie',
  tomatoes: {
    viewer: {
      rating: 3.6,
      numReviews: 659,
      meter: 70
    },
    dvd: 2004-02-03T00:00:00.000Z,
    critic: {
      rating: 8.4,
      numReviews: 8,
      meter: 100
    },
    lastUpdated: 2015-07-14T18:21:21.000Z,
    rotten: 0,
    fresh: 8
  }
}
{
  _id: ObjectId('573a1391f29313caabcd7b98'),
  plot: 'A bitter clown endeavors to rescue the young woman he loves from the lecherous count who once betrayed him.',
  genres: [
    'Drama',
    'Romance',
```

```
    fullplot: "Amid big-budget medieval pageantry, King Richard goes on the Crusades leaving his brother Prince John as regent, who promptly
  languages: [
    'English'
  ],
  released: 1922-10-18T00:00:00.000Z,
  directors: [
    'Allan Dwan'
  ],
  writers: [
    'Douglas Fairbanks (story)'
  ],
  awards: {
    wins: 1,
    nominations: 0,
    text: '1 win.'
  },
  lastupdated: '2015-08-11 00:29:16.047000000',
  year: 1922,
  imdb: {
    rating: 7.7,
    votes: 1460,
    id: 13556
  },
  countries: [
    'USA'
```

```
  },
  poster: 'https://m.media-amazon.com/images/M/MV5BMTU0NzY0MTY5OF5BMl5BanBnXkFtZTcwODY3MDEwMg@@._V1_SY1000_SX677_AL_.jpg',
  num_mflix_comments: 0,
  released: 2008-12-19T00:00:00.000Z,
  awards: {
    wins: 5,
    nominations: 6,
    text: '5 wins & 6 nominations.'
  },
  countries: [
    'USA'
  ],
  cast: [
    'Will Smith',
    'Rosario Dawson',
    'Woody Harrelson',
    'Michael Ealy'
  ],
  directors: [
    'Gabriele Muccino'
  ],
  runtime: 123
}
```

2 Find Potentially Undervalued International Content

(High-rated but low-vote non-USA films)

```
db.movies.find({
  $and: [
    { "countries": { $ne: "USA" } },
    { "imdb.rating": { $gt: 7.5 } },
    { "imdb.votes": { $lt: 25000 } }
  ]
})
```

```
> db.movies.find({ $and: [{ "countries": { $ne: "USA" } }, { "imdb.rating": { $gt: 7.5 } }, { "imdb.votes": { $lt: 25000 } }] })
< {
    _id: ObjectId('573a1391f29313caabcd8de7'),
    plot: "Joe May's sensual drama of life in the Berlin underworld is in many ways the perfect summation of German filmmaking in the silent
    genres: [
      'Drama'
    ],
    runtime: 90,
    cast: [
      'Albert Steinrèck',
      'Else Heller',
      'Gustav Frèhlich',
      'Betty Amann'
    ],
    num_mflix_comments: 0,
    poster: 'https://m.media-amazon.com/images/M/MV5BODM1ZjBkNzktMThjYS00NDNjLWFjYTYtN2E3Mzg2NjJhMmE5XkEyXkFqcGdeQXVyMTczMjA2Nzk@._V1_SY1000
    title: 'Asphalt',
    fullplot: "Joe May's sensual drama of life in the Berlin underworld is in many ways the perfect summation of German filmmaking in the si
    languages: [
      'German'
    ],
    released: 1930-05-03T00:00:00.000Z,
```

```
    rating: 7.6,
    votes: 4186,
    id: 31334
  },
  countries: [
    'UK'
  ],
  type: 'movie',
  tomatoes: {
    viewer: {
      rating: 3.6,
      numReviews: 2848,
      meter: 87
    },
    dvd: 2005-04-19T00:00:00.000Z,
    critic: {
      rating: 7.9,
      numReviews: 8,
      meter: 100
    },
    lastUpdated: 2015-09-13T17:57:46.000Z,
    rotten: 0,
    production: 'Criterion Collection',
    fresh: 8
  }
}
Type "it" for more
Atlas atlas-h4o7hc-shard-0 [primary] sample_mflix >
```

③ Find Projects with Strong Director-Actor Chemistry

(Frequent collaborations with high ratings)

```
db.movies.find({
  $and: [
    { "directors": "Christopher Nolan" },
    { "cast": "Leonardo DiCaprio" },
    { "imdb.rating": { $gt: 8 } }
  ]
})
```

```
      'French'
    ],
    writers: [
      'Christopher Nolan'
    ],
    type: 'movie',
    tomatoes: {
      website: 'http://inceptionmovie.warnerbros.com/',
      viewer: {
        rating: 4.2,
        numReviews: 561365,
        meter: 91
      },
      dvd: 2010-12-07T00:00:00.000Z,
      critic: {
        rating: 8.1,
        numReviews: 326,
        meter: 86
      },
      boxOffice: '$292.6M',
      consensus: 'Smart, innovative, and thrilling, Inception is that rare summer blockbuster that succeeds viscerally as well as intellectually.',
      rotten: 45,
      production: 'Warner Bros. Pictures',
      lastUpdated: 2015-09-12T17:13:32.000Z,
      fresh: 281
```

```
    },
    poster: 'https://m.media-amazon.com/images/M/MV5BMjAxMzY3NjcxNF5BMl5BanBnXkFtZTcwNTI5OTM0Mw@@._V1_SY1000_SX677_AL_.jpg',
    num_mflix_comments: 1,
    released: 2010-07-16T00:00:00.000Z,
    awards: {
      wins: 162,
      nominations: 172,
      text: 'Won 4 Oscars. Another 158 wins & 172 nominations.'
    },
    countries: [
      'USA',
      'UK'
    ],
    cast: [
      'Leonardo DiCaprio',
      'Joseph Gordon-Levitt',
      'Ellen Page',
      'Tom Hardy'
    ],
    directors: [
      'Christopher Nolan'
    ],
    runtime: 148
  }
```

```
    'French'
  ],
  writers: [
    'Christopher Nolan'
  ],
  type: 'movie',
  tomatoes: {
    website: 'http://inceptionmovie.warnerbros.com/',
    viewer: {
      rating: 4.2,
      numReviews: 561365,
      meter: 91
    },
    dvd: 2010-12-07T00:00:00.000Z,
    critic: {
      rating: 8.1,
      numReviews: 326,
      meter: 86
    },
    boxOffice: '$292.6M',
    consensus: 'Smart, innovative, and thrilling, Inception is that rare summer blockbuster that succeeds viscerally as well as intellectually.',
    rotten: 45,
    production: 'Warner Bros. Pictures',
    lastUpdated: 2015-09-12T17:13:32.000Z,
    fresh: 281
  },
  poster: 'https://m.media-amazon.com/images/M/MV5BMjAxMzY3NjcxNF5BMl5BanBnXkFtZTcwNTI5OTM0Mw@@._V1_SY1000_SX677_AL_.jpg',
  num_mflix_comments: 1,
  released: 2010-07-16T00:00:00.000Z,
  awards: {
    wins: 162,
    nominations: 172,
    text: 'Won 4 Oscars. Another 158 wins & 172 nominations.'
  },
  countries: [
    'USA',
    'UK'
  ],
  cast: [
    'Leonardo DiCaprio',
    'Joseph Gordon-Levitt',
    'Ellen Page',
    'Tom Hardy'
  ],
  directors: [
    'Christopher Nolan'
  ],
  runtime: 148
}
```

4 Identify Content for Specific Streaming Demographics

(Short, high-rated documentaries & biographies)

javascript
CopyEdit

```javascript
db.movies.find({
  $and: [
    { "genres": { $in: ["Documentary", "Biography"] } },
    { "runtime": { $lt: 100 } },
```

```
      { "imdb.rating": { $gt: 7 } }
    ]
})
```

```
    ],
    writers: [
      'Richard Carver (titled by)',
      'Terry Ramsaye (titled by)'
    ],
    awards: {
      wins: 1,
      nominations: 0,
      text: '1 win.'
    },
    lastupdated: '2015-08-29 00:37:14.843000000',
    year: 1925,
    imdb: {
      rating: 7.9,
      votes: 677,
      id: 15873
    },
    type: 'movie',
    tomatoes: {
      viewer: {
        rating: 3.7,
        numReviews: 595,
        meter: 90
      },
      dvd: 2000-03-28T00:00:00.000Z,
      critic: {
```

```
      critic: {
        rating: 7.6,
        numReviews: 5,
        meter: 100
      },
      lastUpdated: 2015-07-04T18:53:48.000Z,
      rotten: 0,
      fresh: 5
    },
    num_mflix_comments: 0
  }
  {
    _id: ObjectId('573a1392f29313caabcda09b'),
    plot: 'Tells how King Henry VIII came to marry five more times after his divorce from his first wife.',
    genres: [
      'Biography',
      'Comedy',
      'Drama'
    ],
    runtime: 97,
    cast: [
      'Charles Laughton',
      'Robert Donat',
      'Franklin Dyall',
      'Miles Mander'
    ],
```

```
  ],
  released: 1933-09-21T00:00.000Z,
  directors: [
    'Alexander Korda'
  ],
  writers: [
    'Lajos Birè (story)',
    'Arthur Wimperis (story)',
    'Arthur Wimperis (scenario)'
  ],
  awards: {
    wins: 2,
    nominations: 1,
    text: 'Won 1 Oscar. Another 1 win & 1 nomination.'
  },
  lastupdated: '2015-08-15 00:02:00.380000000',
  year: 1933,
  imdb: {
    rating: 7.3,
    votes: 2414,
    id: 24473
  },
  countries: [
    'UK'
  ],
  type: 'movie',
  tomatoes: {
    viewer: {
      rating: 3.5,
      numReviews: 1249,
      meter: 75
    },
    dvd: 2003-01-23T00:00.000Z,
    critic: {
      rating: 8,
      numReviews: 13,
      meter: 100
    },
    lastUpdated: 2015-09-02T18:26:12.000Z,
    rotten: 0,
    production: 'Criterion Collection',
    fresh: 13
  },
  num_mflix_comments: 0
}
{
  _id: ObjectId('573a1392f29313caabcda0a5'),
  plot: 'Queen Christina of Sweden is a popular monarch who is loyal to her country. However, when she falls in love with a Spanish envoy, she must choose between t
  genres: [
    'Biography',
    'Drama',
    'History'
  ],
  runtime: 99,
```

```
  rated: 'APPROVED',
  cast: [
    'Greta Garbo',
    'John Gilbert',
    'Ian Keith',
    'Lewis Stone'
  ],
  poster: 'https://m.media-amazon.com/images/M/MV5BMjIyMjg1ODk4OF5BMl5BanBnXkFtZTgwNDA0NzkxMjE@._V1_SY1000_SX677_AL_.jpg',
  title: 'Queen Christina',
  fullplot: 'Queen Christina of Sweden is a dominant European ruler in the 17th century, and has never thought of romance. However, she accidentally and secretly fa
  languages: [
    'English',
    'Spanish'
  ],
  released: 1934-02-09T00:00:00.000Z,
  directors: [
    'Rouben Mamoulian'
  ],
  writers: [
    'H.M. Harwood (screen play)',
    'Salka Viertel (screen play)',
    'Salka Viertel (from the original story by)',
    'Margaret P. Levino (from the original story by)',
    'S.N. Behrman (dialogue)'
  ],
    'Ted Sears (screenplay)'
  ],
  awards: {
    wins: 4,
    nominations: 0,
    text: 'Won 1 Oscar. Another 3 wins.'
  },
  lastupdated: '2015-08-17 00:13:02',
  year: 1954,
  imdb: {
    rating: 7.8,
    votes: 285,
    id: 47642
  },
  countries: [
    'USA'
  ],
  type: 'movie',
  tomatoes: {
    viewer: {
      rating: 3.9,
      numReviews: 68,
      meter: 88
    },
    lastUpdated: 2015-08-15T19:14:22.000Z
  }
}
```

5 Find Genre-Blending Innovations with Audience Appeal

(Movies with 3+ genres and strong ratings)

```
db.movies.find({
  $and: [
    { $expr: { $gte: [{ $size: "$genres" }, 3] } },
    { "imdb.rating": { $gt: 7.5 } }
  ]
```

```
  })
    awards: {
      wins: 5,
      nominations: 1,
      text: '5 wins & 1 nomination.'
    },
    lastupdated: '2015-08-26 01:14:49.383000000',
    year: 1935,
    imdb: {
      rating: 7.6,
      votes: 831,
      id: 26564
    },
    countries: [
      'France',
      'Germany'
    ],
    type: 'movie',
    tomatoes: {
      viewer: {
        rating: 4,
        numReviews: 191,
        meter: 88
      },
      production: 'Criterion Collection',
      lastUpdated: 2015-07-04T19:21:41.000Z
    }
  }
Type "it" for more
```

---

6 Find Potential Licensing Targets for Game Adaptations

(Action, Fantasy, Sci-Fi films without existing games)

```
db.movies.find({
  $and: [
    { "genres": { $in: ["Action", "Fantasy", "Sci-Fi"] } },
    { "imdb.rating": { $gt: 7 } },
    { "video_game": { $exists: false } }
  ]
})
```

```
    imdb: {
      rating: 7.7,
      votes: 4079,
      id: 33712
    },
    countries: [
      'USA'
    ],
    type: 'movie',
    tomatoes: {
      viewer: {
        rating: 3.9,
        numReviews: 1037,
        meter: 83
      },
      dvd: 2007-02-06T00:00:00.000Z,
      critic: {
        rating: 7.4,
        numReviews: 15,
        meter: 100
      },
      lastUpdated: 2015-09-10T19:10:19.000Z,
      rotten: 0,
      production: 'Sony Pictures Entertainment',
      fresh: 15
    }
  }
Type "it" for more
```

7 Find Potential Documentary Series Expansions

(Highly rated, long documentaries)

```
db.movies.find({
  $and: [
    { "genres": "Documentary" },
    { "imdb.rating": { $gt: 8 } },
    { "runtime": { $gt: 100 } }
  ]
})
```

```
  released: 1995-01-05T00:00:00.000Z,
  awards: {
    wins: 3,
    nominations: 3,
    text: 'Won 1 Primetime Emmy. Another 2 wins & 3 nominations.'
  },
  lastupdated: '2015-09-06 00:40:33.587000000',
  year: '1995è',
  imdb: {
    rating: 9,
    votes: 1693,
    id: 123360
  },
  countries: [
    'UK'
  ],
  type: 'series',
  tomatoes: {
    viewer: {
      rating: 3.8,
      numReviews: 144,
      meter: 74
    },
    dvd: 2006-07-25T00:00:00.000Z,
    lastUpdated: 2015-07-31T19:04:50.000Z
  }
}
Type "it" for more
```

8 Identify Unique Audience Segments via Niche Content

(Highly rated family-friendly animated musicals)

```
db.movies.find({
  $and: [
    { "genres": { $in: ["Animation", "Musical"] } },
    { "rated": { $in: ["G", "PG"] } },
    { "imdb.rating": { $gt: 7.5 } }
  ]
})
```

```
          Japanese
    ],
    released: 1986-08-02T00:00:00.000Z,
    directors: [
      'Hayao Miyazaki'
    ],
    writers: [
      'Hayao Miyazaki'
    ],
    awards: {
      wins: 1,
      nominations: 0,
      text: '1 win.'
    },
    lastupdated: '2015-08-18 00:30:23.687000000',
    year: 1986,
    imdb: {
      rating: 8.1,
      votes: 84503,
      id: 92067
    },
    countries: [
      'Japan'
    ],
    type: 'movie'
  }
Type "it" for more
Atlas atlas-b4e7hc-shard-0 [primary] sample_mflix>
```