Document Processing Architecture

- **Input Rate**: 5M docs/day = ~3,470 docs/minute (1440 batches/day)

- **Batch Processing Pattern**: Documents delivered every 60 seconds by internal process

- **Peak Batch Size**: ~3,470 documents per batch (with potential variation ±20%)

- **Processing Time per Document**: Estimated 2-5 seconds (parallel ML inference)

- **Lambda Concurrency per Batch**: ~3,470 concurrent executions (auto-scaling)

- B**atch Processing SLA**: Complete processing within 5 minutes of batch receipt

- **Cost Effective**: 96% cheaper than PostgreSQL/Cassandra (~$120 vs $3100/month)

- **Unlimited Scale:** No capacity planning needed, grows with your data

- **Analytics Ready**: Native integration with Athena, Glue, EMR for data science

- **Durability**: 99.999999999% (11 9's) durability, automatic replication

- **Multiple Storage Classes**: Intelligent tiering for cost optimization