



Scalable contextual image indexing and search

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Agenda

- **Project goals**
- **System components**
- **Architecture diagram**
- **Debugging and testing**
- **Takeaways**
- **Future scope**

Project goals

- Scalable contextual feature extraction
- Safe search tagging
- Scalable search

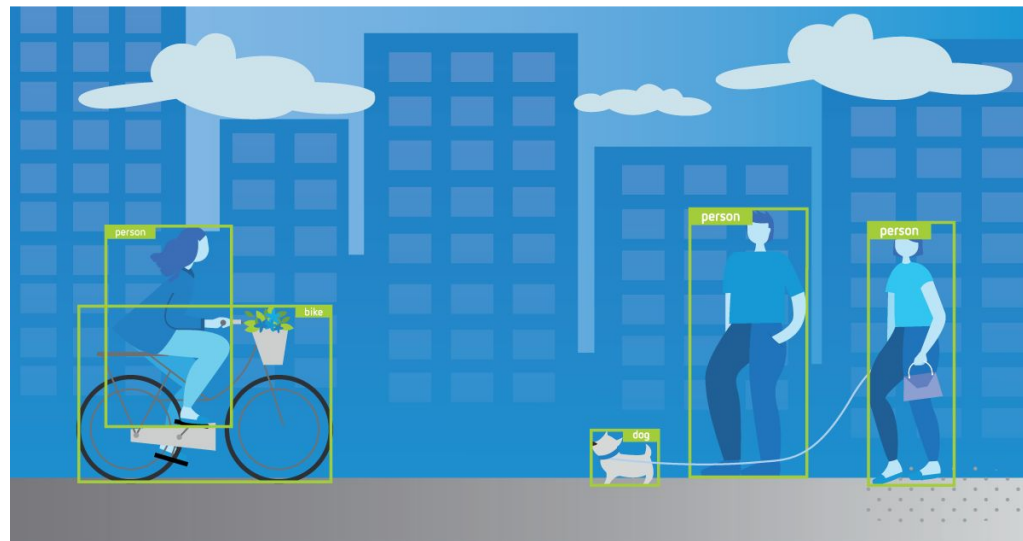
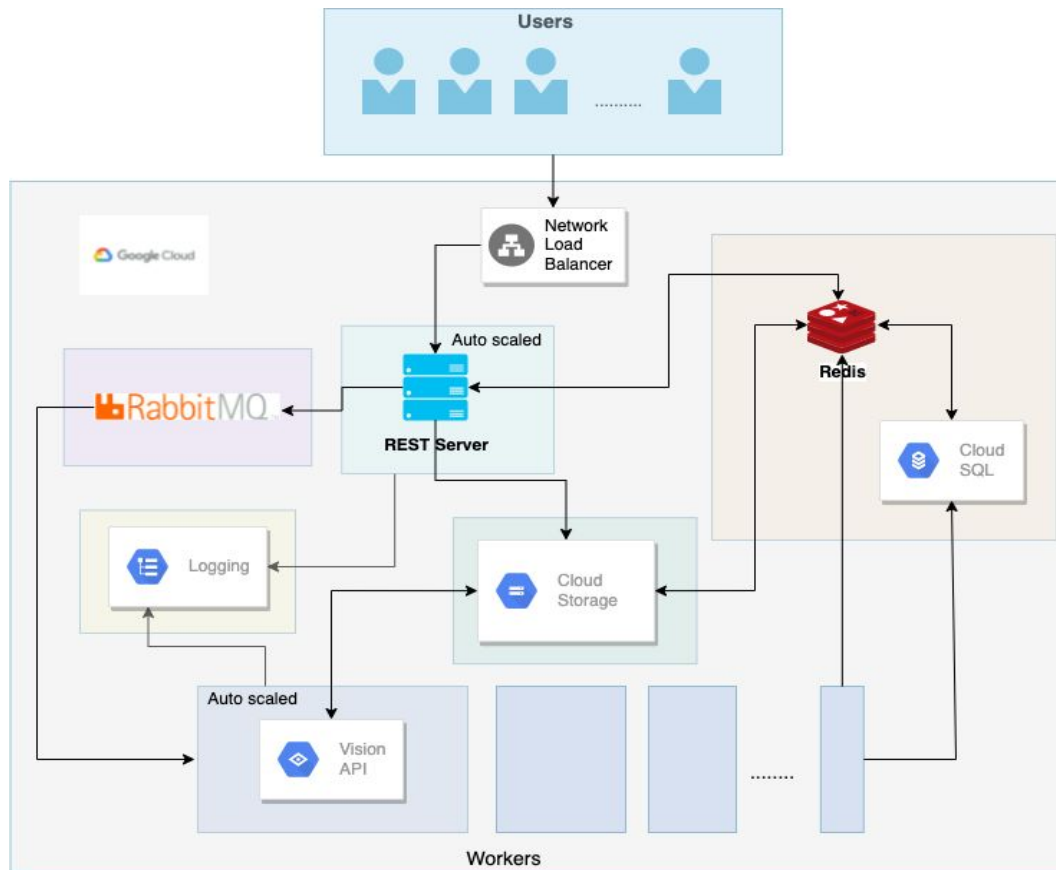


Image source: Analytics India magazine

Components

- Flask REST server
- Google Cloud storage(Bucket)
- Google Cloud Vision API
- RabbitMQ
- CloudSQL
- Kubernetes
- Redis

Architectural Diagram



Debugging

- Event and debug message logging
- Kubernetes Cluster logs

Testing

- Unit tests
- Integration tests
- System tests
- Regression tests

Learnings

- **Individual component deployment, scalability and maintenance**
- **Quick fault isolation**
- **Modularity and interoperability**
- **Smaller code base for components making it easy to understand**

Future Scope

- **Multiple keyword based selection**
- **Enabling better security for image access**
- **Implementing a cache eviction policy**
- **Similar word search**



Thank You!