MMCi Practical Data Science

lecture 05

erich s. huang
erich.huang@duke.edu

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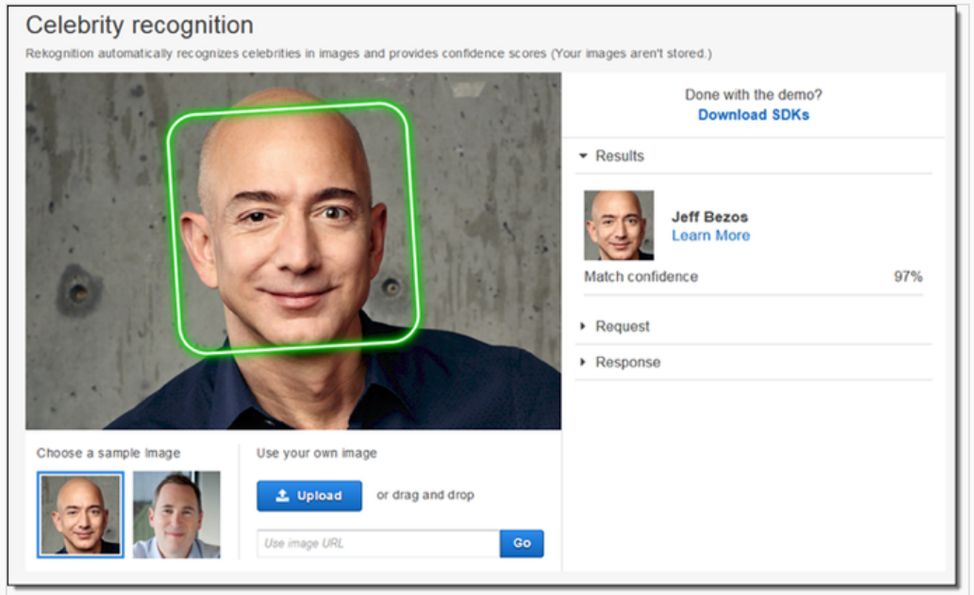
Amazon Rekognition can now recognize celebrities

Posted 21 hours ago by Frederic Lardinois (@fredericl)



Amazon Rekognition, Amazon's deep learning-powered image detection and recognition service, is getting a little bit smarter today. The service can now recognize thousands of celebrities across a number of categories that include politics, sports, business, entertainment and media.

I tried it with a couple of random images I found on Google (ranging from Conan O'Brien to Justin Bieber and a few random actors and actresses in-between) and Rekognition got them all right. Like similar services from Google and Microsoft, developers use Rekognition by pinging an API, but if you have an AWS account, you also can try the demo here.

Whenever it's available, Rekognition will also link to that celebrity's IMDB page (which makes sense, given that the IMDB is an Amazon subsidiary).

This new feature complements existing Rekognition capabilities like being able to detect people's emotions and demographics, facial recognition based on your own image sets and object and scene recognition.

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Amazon Web Services

FOUNDED
2006

OVERVIEW
Amazon Web Services provides information technology infrastructure services to businesses in the form of web services. Its products and solutions include cloud computing, compute, networking, storage and content delivery, databases, analytics, application services, deployment and management, mobile services, applications, AWS marketplace software, startups, enterprises, partners, government and education, ...

LOCATION
Seattle, WA

CATEGORIES
Web Development, Software, Information Technology, Information Services

WEBSITE
http://aws.amazon.com

Full profile for Amazon Web Services

CITY

Bill Would Transform New Yorkers' Digital Interaction with Government

May 16, 2017 | by Samar Khurshid

Tweet Like 52 Share

Council Member Ben Kallos, right, has a new API bill (photo: William Alatriste)

City Council Member Ben Kallos is always looking for ways to make government more efficient and accessible through technology and the use of data. To that end, Kallos, himself a programmer, introduced a bill last week that would require information generated or received by city agencies to be available through an interface that allows easy use of the data and, ideally, a streamlined experience for New Yorkers interacting with their city government.

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https://developer.nytimes.com

Discussion Questions

1. What is a 'service'?
2. What are the advantages of such 'services'?
3. What are the disadvantages of 'services'?

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Application Programming Interfaces

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menu = "abstraction"

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item = "service"

Customer requests "Renée's Special"

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service request

kitchen

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kitchen

service fulfilled

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kitchen

kitchen

The PMI Cheesecake Factory®

Tensor Flow (Deep Learning) model for acute myocardial infarction

"kitchen"

kitchen

58% Probability of AMI in 5 years

service fulfilled

Using an API with R

The Bezos BIG MANDATE

> Bezos assigned a couple of Chief Bulldogs… headed up by Uber-Chief Bear Bulldog Rick Dalzell. Rick is an ex-Army Ranger, West Point Academy graduate, ex-boxer, ex-Chief Torturer slash CIO at Wal*Mart, and is a big genial scary man who used the word "hardened interface" a lot

Amazon Web Services posts $3.5B in sales, up 47% from last year, reaches $14B annual run rate

BY TAYLOR SOPER on February 2, 2017 at 1:24 pm

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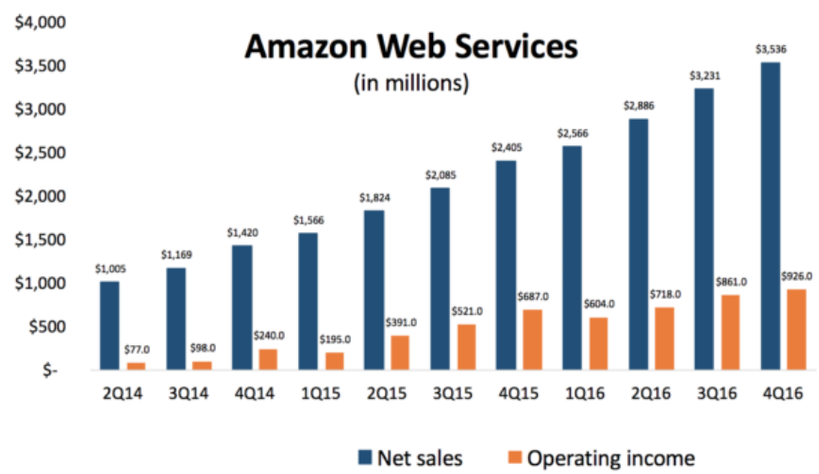

Amazon's cloud computing arm continues to generate billions in revenue and help the tech giant post a profit.

Amazon Web Services reported $3.53 billion in revenue for Q4 2016, up 47 percent from the year-ago quarter and up more than $300 million from Q3 2016.

AWS accounted for 8 percent of Amazon's $44.68 billion in total revenue for Q4. That's about in line with last quarter, when AWS reeled in $3.2 billion, or nearly 10 percent of Amazon's total Q3 revenue.

With $926 million in operating income for Q4, AWS accounted for more than 71 percent of Amazon's $1.3 billion in operating income.

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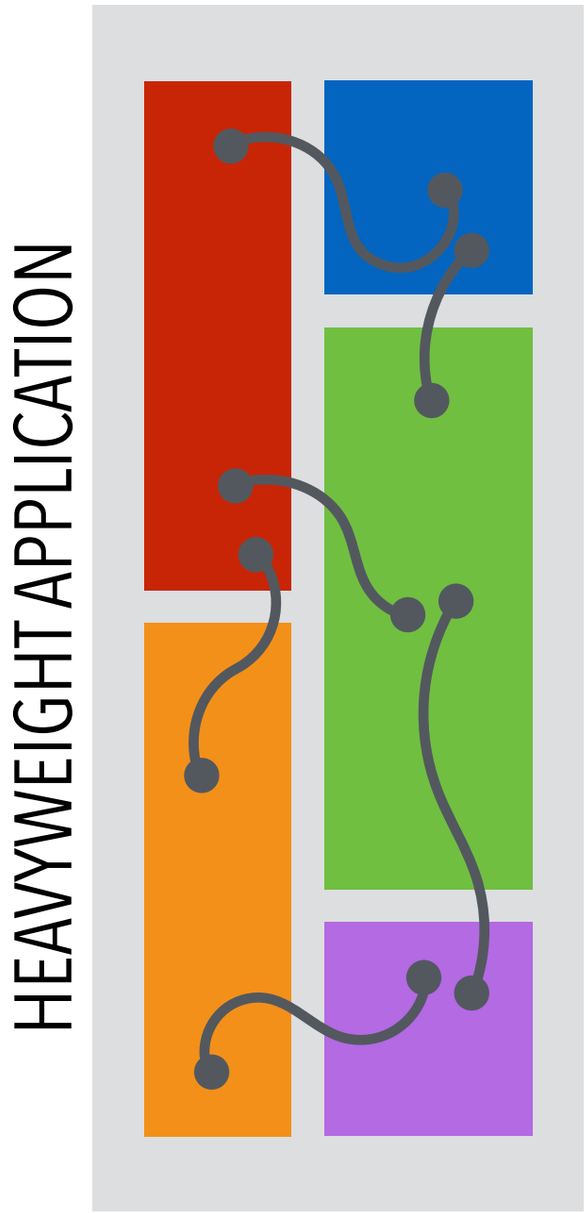
Discussion Questions

1. What is a 'service'?
2. What are the advantages of such 'services'?
3. What are the disadvantages of 'services'?

ARCHITECTURAL IMPLICATIONS



Deep, stove-piped applications

Brittle dependencies

Application/business logic deeply intertwined

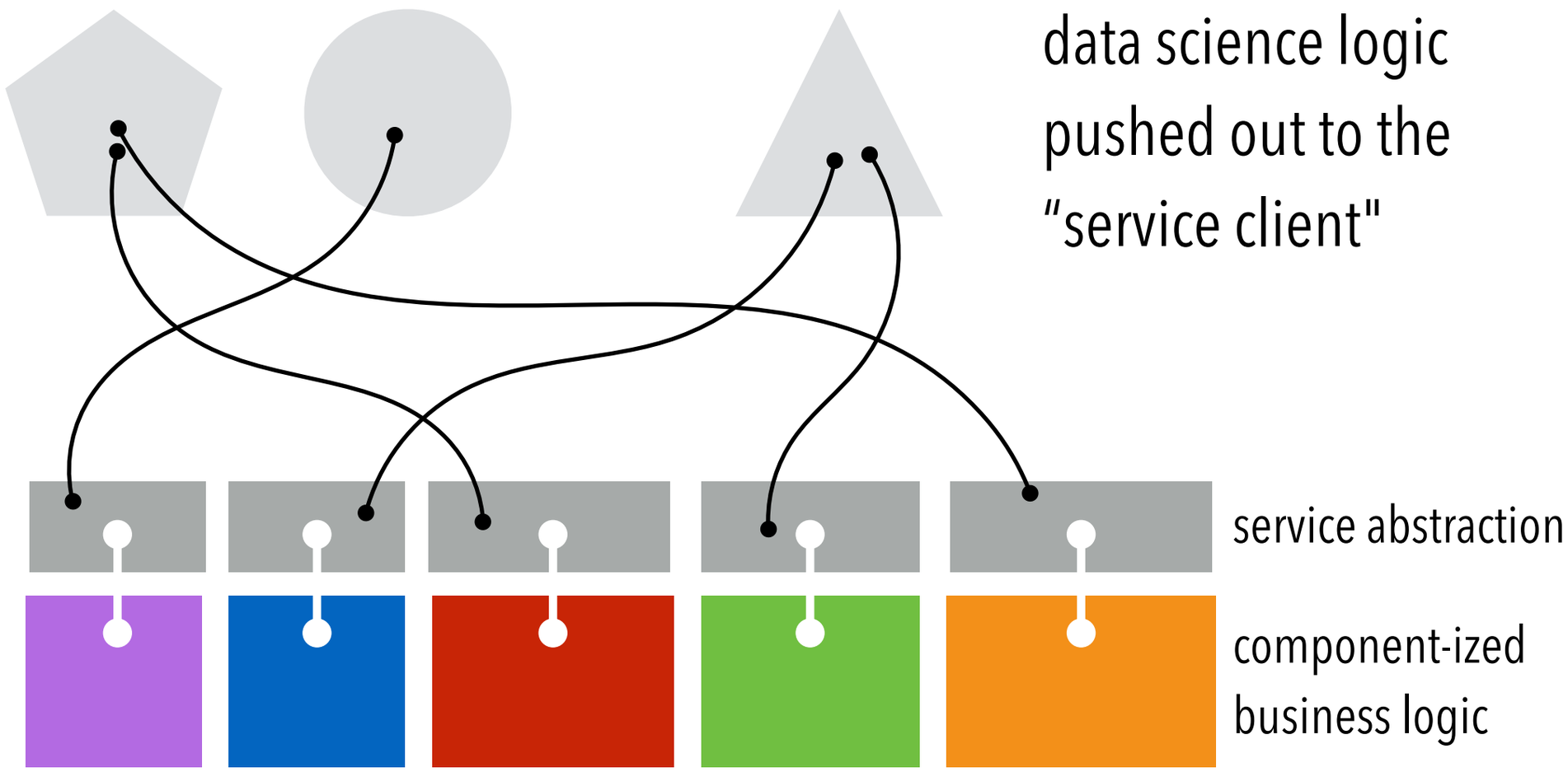
ARCHITECTURAL IMPLICATIONS

Shallow, “microservices” infrastructure

Loose dependencies

Complex integrative data science logic pushed out to the “service client"

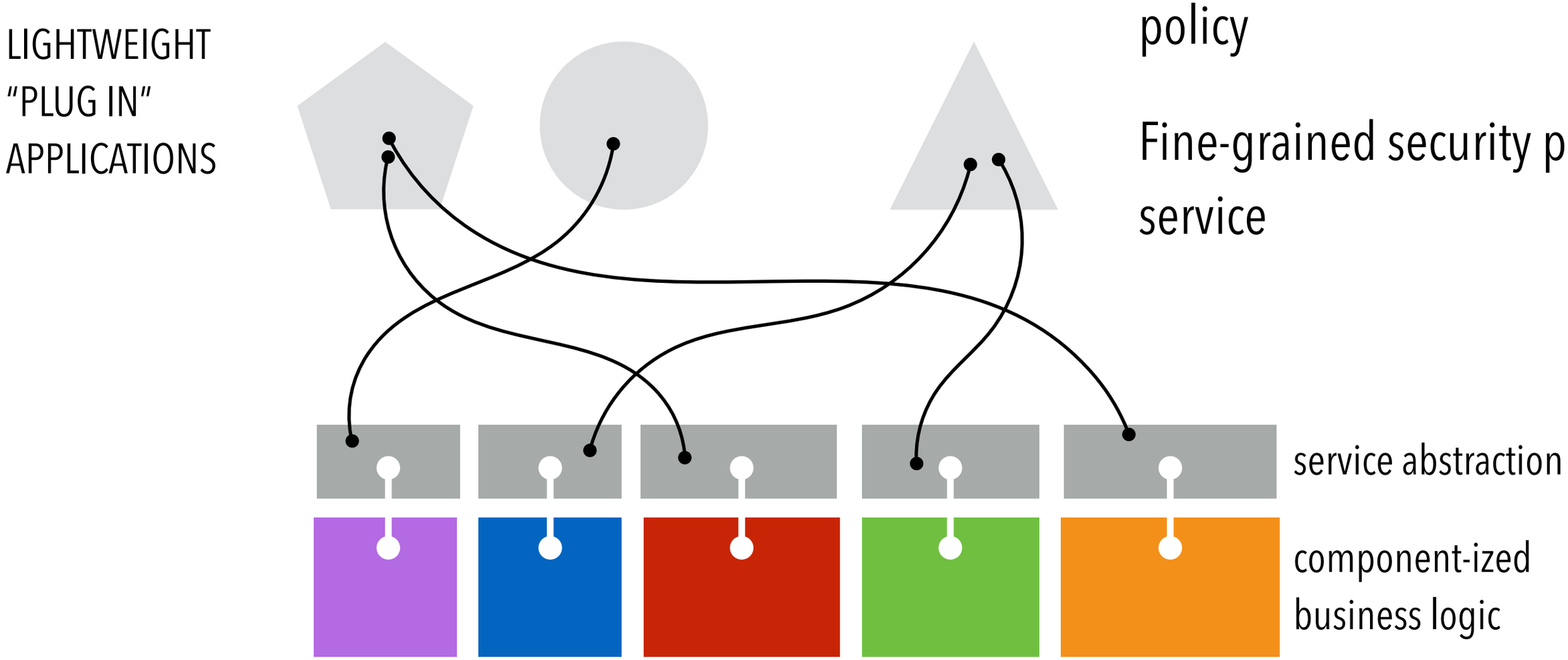
LIGHTWEIGHT “PLUG IN” APPLICATIONS



Security

Instead of "one size fits all" blanket (and restrictive) security policy

Fine-grained security per service



Services Case Study

Discussion Questions

1. *Margolin, et. al* describes an Open Challenge for building predictive models for breast cancer, to host an arbitrary number of researchers or participants for contending with a data science problem, what are the things you need? What is a good way to think about each individual predictive model that was submitted for the Challenge—with this in mind, what is another way of thinking about how a participant could have "submitted" a predictive model (since we're talking about services)?
2. How does Martin Fowler define an "application". Going by this definition, if we think of the Breast Cancer Challenge being an application, how might it be broken down?
3. What are good examples of 'monolithic' applications?
4. Martin Fowler notes that "Remote calls are more expensive than in-process calls". What does he mean?
5. What is Conway's Law?
6. What implication does a Microservices Architecture have for a software team's responsibilities?