

Oak-Tree Technologies Data Software and Services

www.oak-tree.tech





Company Overview

Oak-Tree builds technology that connects people to their data and empowers insight.

Harnessing Information to Create Knowledge and Generate Actionable Intelligence.

With the right data and technology, it is possible to ask important questions. Hard questions. The type of questions whose answers are capable of changing the world.

Oak-Tree exists to help individuals and organizations find meaning in their data. We build software and services that empower fast decision making and consequential intelligence.

Industries and Markets.

- Healthcare
- Real-estate
- Finance
- Education and Training
- Web and E-commerce
- Government

Solutions & Services

Oak-Tree works with the most innovative technologies to build custom solutions for your needs.

Services.

- Full-cycle Software Development
- Machine Learning and Artificial Intelligence
- Data Engineering Services and ETL Pipeline Development
- Product Prototyping
- DevOps, Cloud, Container, and Platform Consulting
- Technical Training and Courseware for Software Development, ML/AI, and DevOps

Expertise

Web and Mobile.

TensorFlow

mlflow Aminio & kafka.

Soark

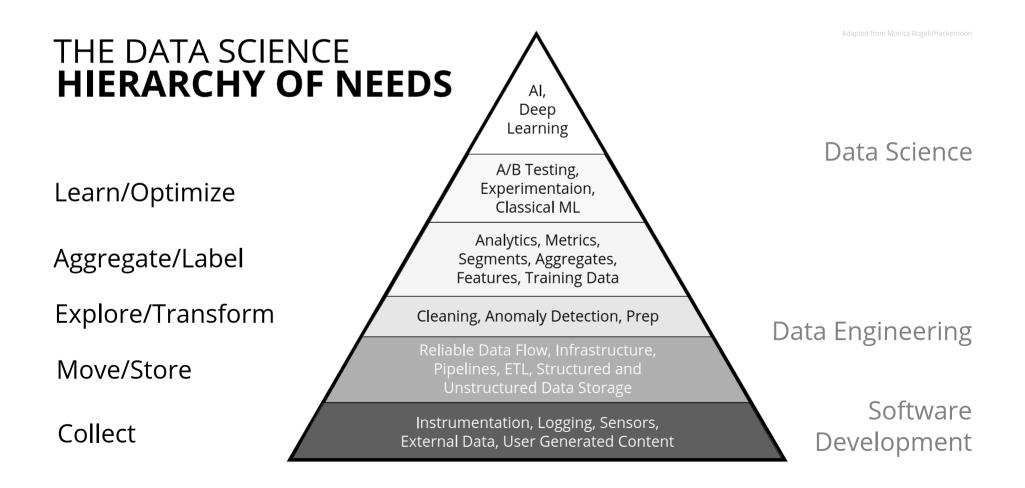
Ethereum

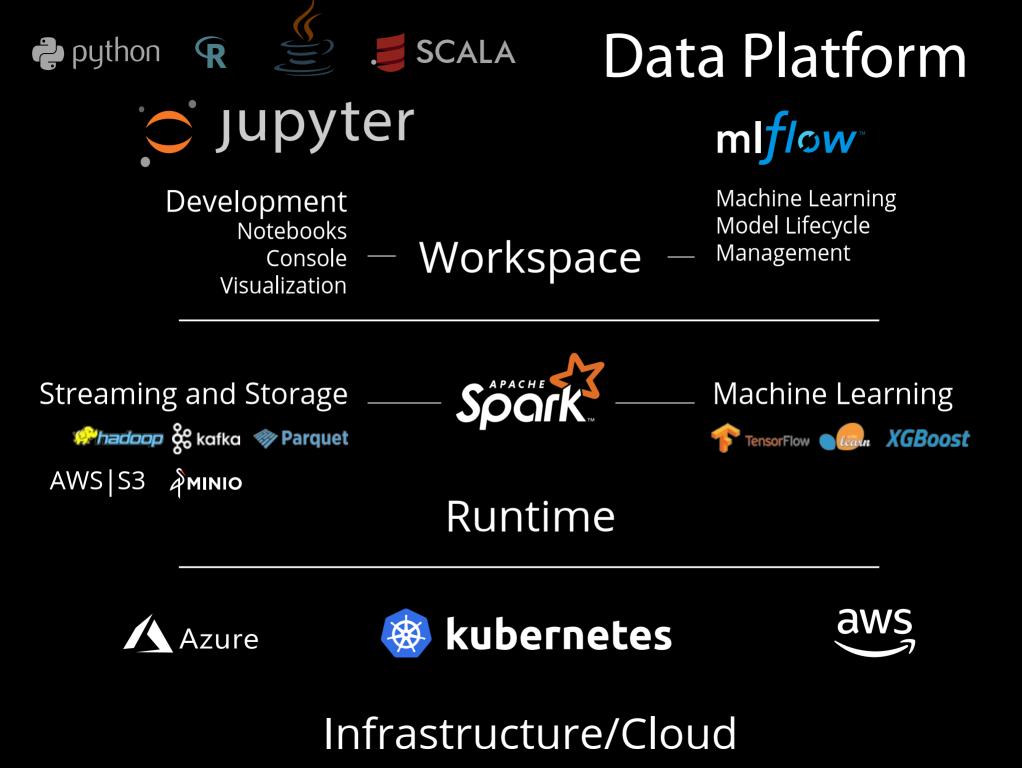


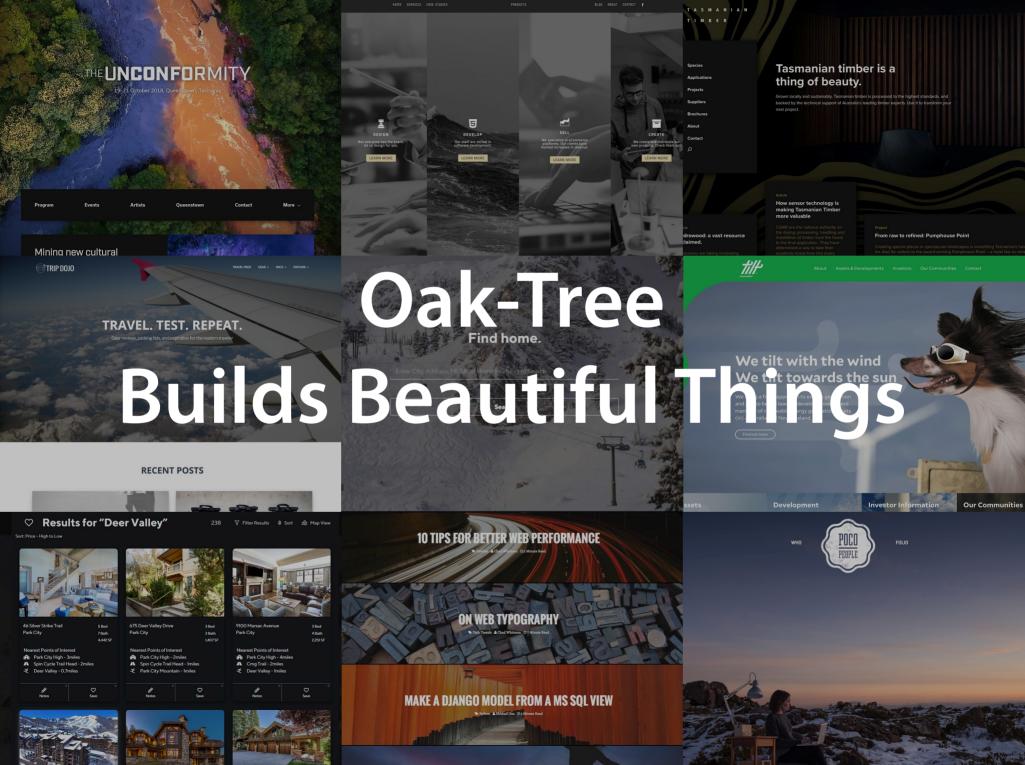
W Constitution
 C PyTorch
 C PyTorch
 C DASK

Architecture and Strategy

As we build solutions, we help companies nurture their capabilities to ask more complex questions.







Acorn

The web platform for data.

Turn your ideas into content and experiences faster than ever before.



Why Use Acorn?

Acorn is a modern and powerful content management system that will make your editors happy and delight your developers.

Designed for data intensive systems.

Built-in pipelines aimed directly at machine learning allow you to harness integrate into an open ecosystem.

Stand out.

Built on an open source core including Python, Django, and Wagtail CMS. Acorn is beautiful on the inside and outside.

Engage Your Audience

Engaging your audience will create customers, nurturing existing relationships will create fanatics.

Discuss and coment.

Comments allow your audience to communicate with you and other readers, providing input on a topic, opportuntiies to ask questions, or to give feedback.

>

Comments 3

Reader picks All Comments



Salt Lake City | 11 January You got into this a little bit in the article, but it would be really great if you had a future article that covered the practical considerations of running under Kubernetes versus Hadoop. Does the Docker based nature of Kubernetes make it easier to deploy specialty containers than Hadoop allows? I also noticed that Spark on K8s is marked as beta, do you know when that might be promoted to full support?

Reply 2 Recommended



Centerville | 12 January

@Kalervo Tapio This is currently planned. The entire big data ecosystem is changing. While it's been venerable and powerful, Hadoop is definitely fading from prominence. A lot of organizations are trying to standardize all workloads on top of Kubernetes. While Kubernetes provides a pretty good cluster abstraction based on processes, though, it's

USER ~ COMMENT **How Does Your Organization Use** roakes It really is astounding that Google open sources so much of its software. If you Learning and AI? trillion dollars worth of research and development accessible to anyone with a page, you can be up and running with a working instance of the application in thing is intended to work. By inspecting the sources, you can then integrate it Thanks for sharing your input about AI adoption in your organization. We are working on a report about how AI is used in the Intermountain west. If you provide your email at the end of this form, we your customers) consumption. Totally and completely astounding. will provide you a copy of that report when it is finished EDIT Where do you do busi Company

Intermountain West: Colora

Hear and understand.

Lab Notes

Training

Forms enable you solicit feedback and start conversations.

Oak-Tree solutions

All things in moderation.

UNAPPROVE

c ALL COMMENTS

Built-in AI prevents spam and allows you to keep things civil.

Q Search comments

TRASH

Something for Everyone

Acorn is packed with features to make everyone more productive.





FOCAL POINT (OPTIONAL) To define this image's most important region, drag a box over the image above.

MAX DIMENSIONS 2560x1440 FILESIZE 1.0 MB

PAGES AWAITING MODERATIC

| TITLE | | | | | |
|--------------|--------|------|---------|--|--|
| Contact Page | | | | | |
| APPROVE | REJECT | EDIT | PREVIEV | | |
| | | | | | |

Search Engine Optimization.

Acorn has SEO best practices all taken care of. Tags, open graph, structured data, sitemap, and even AMP pages are builtin. You just add your content.

Always look your best.

Acorn optimizes your imagess on demand. Upload a high resolution and set a focal point, new versions will be created as needed to ensure that they look sharp and load quickly.

Workflows.

Design editorial workflows and ensure quality by creating limited accounts for editors or moderators, and approving content changes before they are published.

| Sun | Mon | Tue | Wed | Thu | Fri | Sa |
|-----|-----|-----|-----|-----|-----|----|
| 28 | 29 | 30 | 31 | 1 | 2 | |
| 4 | 5 | 6 | 7 | 8 | 9 | 1 |
| 11 | 12 | 13 | 14 | 15 | 16 | 1 |
| 18 | 19 | 20 | 21 | 22 | 23 | 2 |

Scheduled Publishing.

Get ahead by scheduling when content becomes available.



Connect and integrate.

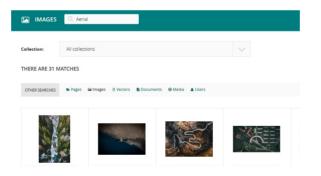
Hooks built into the platform allow you to bring outside resources in and export data.



March 3, 2020, 12:55 a.m. by 🦳 ethan.chap

Revision history.

Track the evolutions of your site. What edits were made and who made them?



Extensible, searchable.

Acorn is deisgned to connect all your content with everything searchable.

| ¶ Text | Image |
|------------------|-------------------|
| Captioned image | M Vector |
| Captioned vector | Slider |
| Html | ¶ Section summary |
| | Column |

Rich content types.

Create mobile friendly content using column layouts, text, buttons, and more.



Dashboards for days.

Acorn makes it easy to create dashboards to view important platform metrics.

Oak-Tree Creates Innovative Technologies

Teaching Machines to See

Machine vision software uses computational techniques to allow computers to analyze pictures, select features of interest, and use that data to reveal insight.

Models of Health

We live in three dimensions, so should our healthcare data.

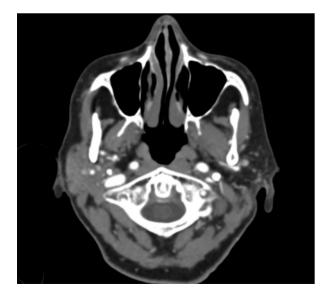
Moving Beyond Flatland.

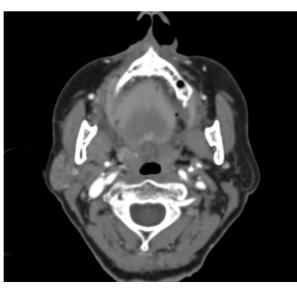
- 3D medical imaging provides context and diagnostic value by giving clinicians more than a flat stack of images.
- When combined with additional data, which itself can be pulled from the models; it is possible to create powerful visualizations, improve diagnostic accuracy, or more effectively educate patients.

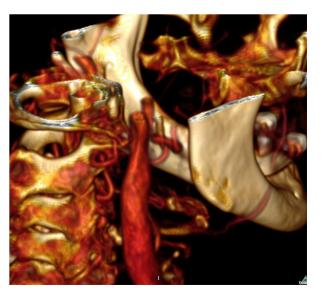
CT and MRI scanners acquire data as two dimensional slices.

Slices are stacked together into volumes, which are then analyzed to find patterns.

The models can be combined with the segmented data to provide physicians and patients with new ways of understanding their health and providing care.





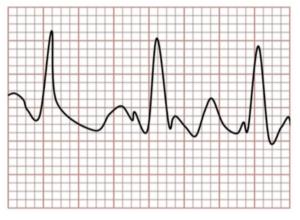


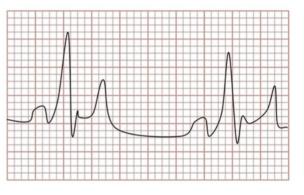
Assessing Atrial Fibrillation Treatment Efficacy

Machine vision techniques can provide tremendous insight about how to help cardiac arrhythmia patients.

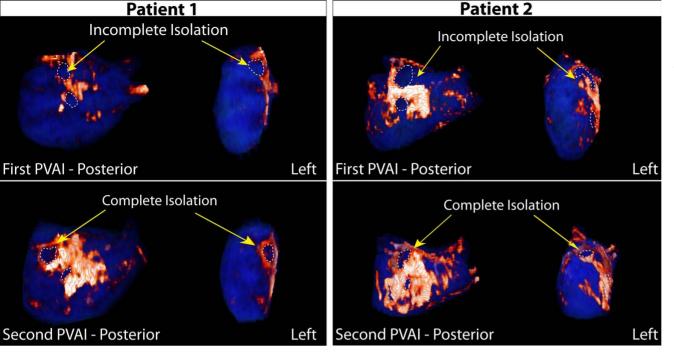
Atrial fibrillation is the most common arrhythmia in the world and impacts tens of millions of people.







A healthy heart has a coordinated and regular heart beat. Arrhythmias occur when parts of the heart lose their coordination due to errant electrical signals. Atrial fibrillation is caused by uncoordinated electrical activity in the left atrium. It leads to an irregular heart beat which prevents the heart from effectively pumping blood. Atrial fibrillation is just one of many types of arrhythmias, but it can lead to others (such as elongated PR, shown above) and puts patients at risk for other health risks including heart attack and stroke.

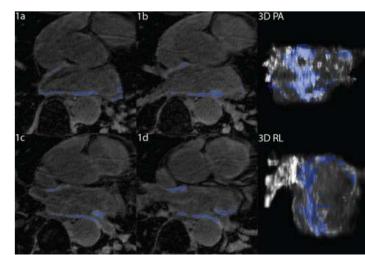


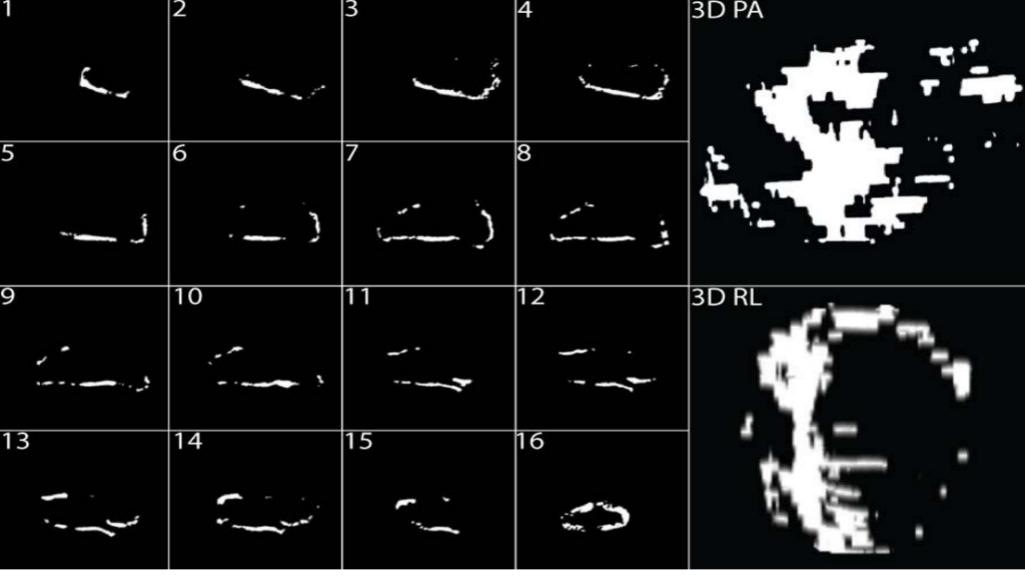
Assessing Treatment Early and Effectively.

- Atrial fibrillation is treated interventionally by finding unhealthy tissue and ablating (killing it)
- Ablation treatment is a fine art form. Frequently, tissue is only partially ablated and will continue to contribute to uncoordinated electrical activity.
- Knowing if tissue has been completely treated can be difficult to to assess without an invasive procedure.
- Non-invasive (medical imaging) therapies combine with machine vision can help to quantiy how effective a treatment has been and whether additional intervention is necessary.

To effectively stop atrial fibrillation, it is necessary to isolate electrical signals in the left atrium. Incompletely isolating the signals results in failed treatment.

High contrast medical imagery combined with machine vision and segmentation techniques greatly facilitate the assessment of treatment efficacy. It can lead to the building of patient specific models to guide further intervention.





Machine Learning Allows the Building of Patient Specific Models.

It can be difficult to apply new therapies because of how labor intensive it can be to create models outside of the research lab. Machine learning can be leveraged to segment images rapidly and efficiently without losing accuracy.

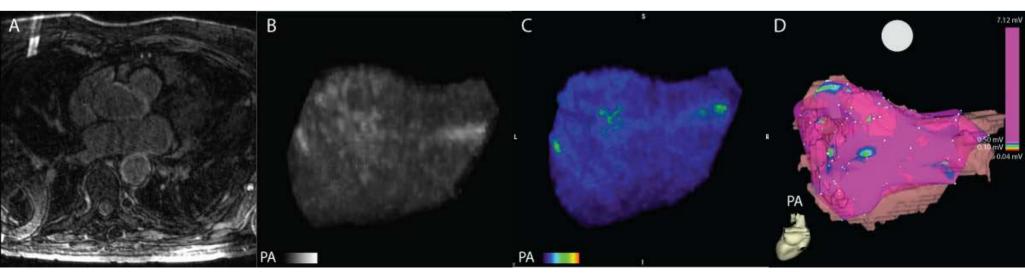
Quantifying the Severity of Atrial Fibrillation

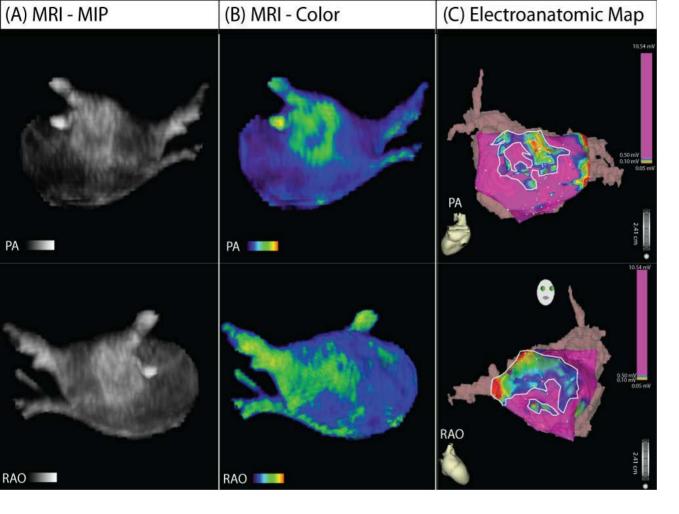
Atrial fibrillation actively changes the structure of the heart, entrenching the arrhythmia and making it more difficult to treat.

MRI studies (A) combined with machine vision techniques (B, C) can create patient specific models of disease that are predictive of electrical abnormalities (D).

Structural Changes in the Heart Correspond to Electrical Changes.

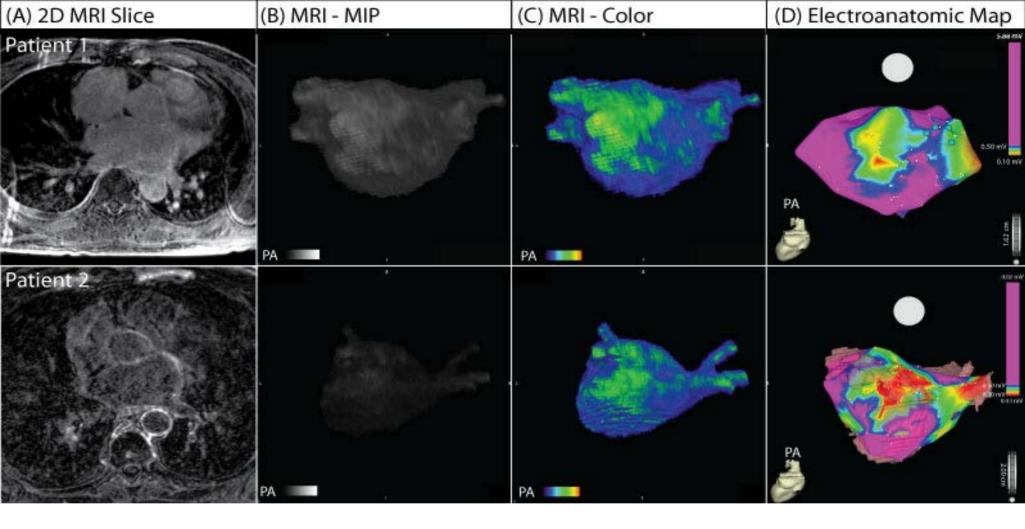
- These structural changes aren't always reflected in the way the disease manifests; but strongly predict response to therapy.
- They are really hard to see without an invasive study, though. Medical imaging alongside computer vision, segmentation, and machine learning asessment can give insight to how far along the disease really is. This information then informs treatment options leading to better outcomes.





Pictures Worth Thousands of Words.

MRI combined with image processing pipelines provide a powerful tool to inform doctors how to treat arrhythmias. Visualizations can help providers plan intervention and then to communicate findings and care plans to the patient.



Creating Positive Feedback Loops.

- The resulting models provide key insights into how a patient will respond to treatment. Patients with more observed structural change and higher degree of scarring require much more aggressive therapy then those with less change.
- Over time, as more data is acquired, it is possible to even more effectively target therapy and predict outcome.

Lab Console

Technology training and software development in the Cloud.

Remote Software Development Labs

 Connect to Lab Console

 Got

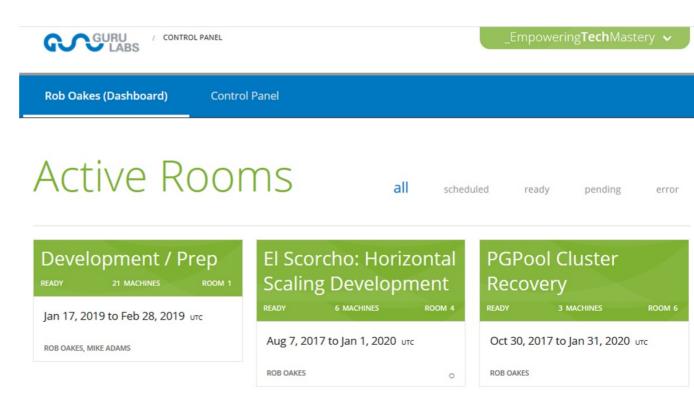
 Connect!
 What is Lab Console?

Creating environments is a major challenge in development and technical training.

Development Should Reflect Production. (But Usually Doesn't.)

GURU LABS

• Development usually happens at small scale in environments that is not representative the production deployment. This results in complex bugs being found after pushing to production that impacts operation and uptime.

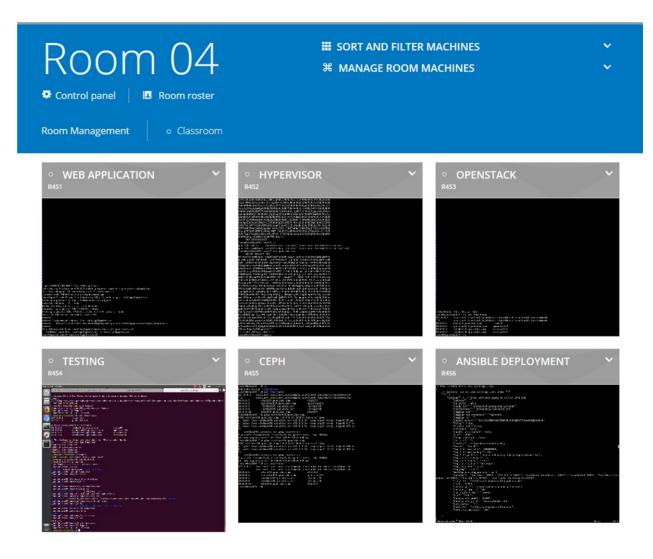


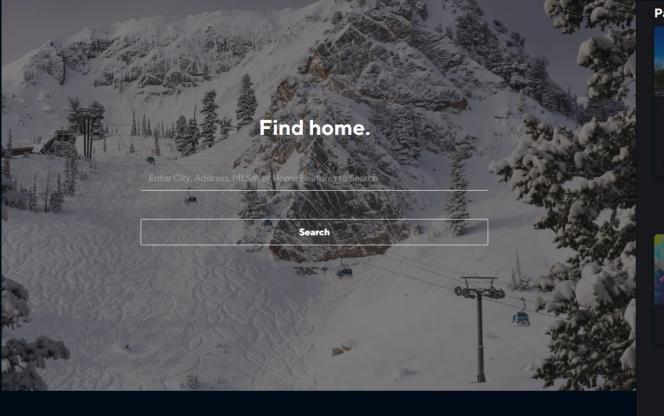
Lab Environments, On Demand.

- Lab Console allows for the creation and versioning of software environments for both developers and training providers.
- Once created, environments can be cloned, copied, or exported.

Securely Available, Anywhere.

• Lab Console can provide access to dozens (or hundreds) of machines through a simple web interface, allowing for collaborators to work together to solve complex problems.

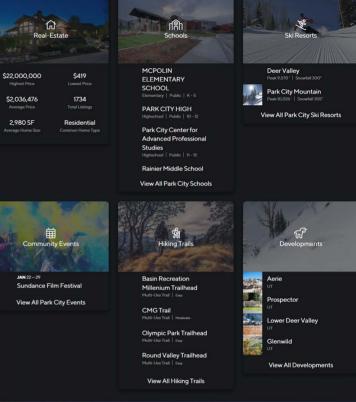




Mountain Luxury Compass

Charting the future of real-estate.

Park City Area Information



Want to Live Here? Search current listings and properties in Park City

hborhood, Address, Zip, Listing Number, and Listing Description

Search

Helping People Find Their Perfect Place

Buying a home is a deeply personal decision, all-too-often made purely by instinct and with bad information. Buyers, sellers, and agents all deserve better.

Better For Buyers.

- Provides tools to allow buyers to explore what makes homes, neighborhoods, and communities special through relevant data and immersive technologies.
- Once a buyer finds properties, the platform helps buyers take the next steps in buying a home.
- Relevant and up-to-date data about how much homes are worth are available for all markets.
- Streamlines communication and puts messages in one place.

Better For Sellers.

- Lack of data can make it hard for sellers to understand their market or set expectations on how long the home might be on the market. Compass helps sellers know how to price their homes.
- Research tools for understanding the market, area, and trends are unified into a single platform.

Better for Agents.

- Compass provides brokerages modern tools for their agents to help with promotions, research, and lead generation.
- The platform facilitates the most personal (and important) parts of finding a home for buys, and marketing a home for sellers. It then utilizes technology to streamline the rest.

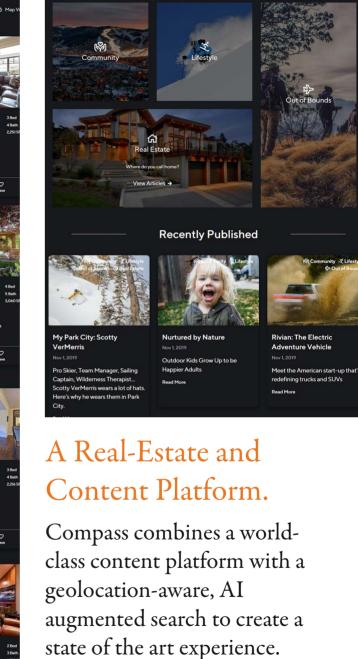
The Platform.

Mountain Luxury Compass is a next generation realestate platform. It empowers agents to become trusted advisors, facilitating access to the most up-to-date data so that clients can make smart real-estate decisions.

Features.

- Advanced community aware home and listing search.
- Integration with advanced mapping technologies which allow buyers and sellers to explore homes, neighborhoods, and communities.
- Comprehensive data about schools, community features, recreation opportunities, and regional history.







| Park Cit | r Strike Tra y, UT 840 | | |
|---|---------------------------|---------------|-------------|
| | | | Residential |
| 5 | 7.00 | 4442 | \$1,349 |
| Bed | | | |
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| Notes | S | we | Commute |
| TWO LOS | | | |
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| arest Po IRESORT Ber Valley 7 Miles Aw | ay | erest | |
| arest Po RESORT Per Valley | ay Peak | erest | |

🕸 Real Estate 🛛 🕱 Points of Interest

Home Details

Description

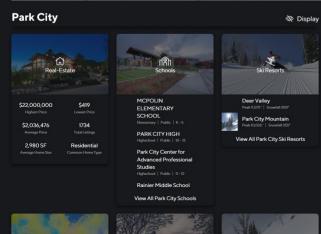
Ski-In and Out at Deer Valley - Transitional Design with an Edge

Quick Facts

| Cable Available | District: Park City | Park City |
|--|--|---|
| Electricity Connected High Speed Internet Available | | |
| Natural Gas Connected | | |
| Phone Lines/Additional Heating | | |
| Natural Gas | | |
| | Cable Available Electricity Connected High Speed Internet Available Natural Gas Connected Phone Lines/Additional Heating | Cable Available Cable Available Datrict Park City Electricity Connected High Spear Intrimert Available Natural Gas Connected Phone Lines/Additional Heating Natural Gas |

Point of Interest Map





Results for "Deer Valley"

Sort: Price - High to Low



| 7948 Red Tail Ct | 6 Bed |
|------------------|--------|
| | 8 Bath |
| \$8,900,000 | 7,259 |
| Deer Valley | 0.65 A |
| | |



| Under Construction | |
|--------------------|---------|
| 8095 Woodland | 6 Bed |
| View Dr | 8 Bath |
| view Dr | 4,616 9 |
| \$8,450,000 | 1 Ac |
| Park City | |
| | |

| 6415 Silver Lake | 5 Bed |
|------------------|----------|
| D- | 7 Bath |
| Dr | 3,058 SF |
| \$5,350,000 | 0.4 Ac |
| Park City | |



Dr







6 Bed 9 Bath 8.413 SF 2 Bellemont Ct \$4,500,000

4 Bed 6 Bath 4.000 SF

Both Person and Machine Savvy.

7 Bath

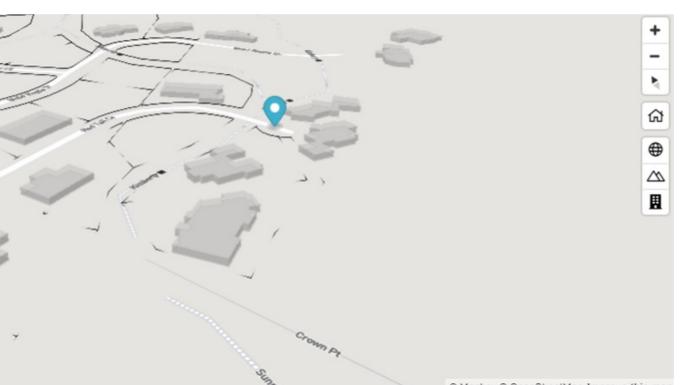
5.428 SF

Compass uses real-estate agent experience and machine learning/ AI to match buyers with the perfect home.

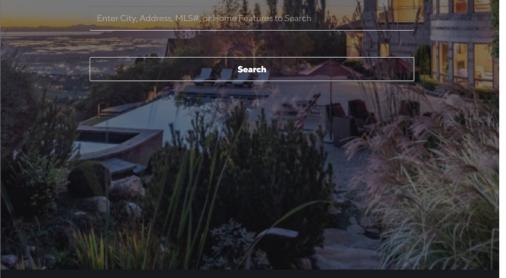
Engage and Understand.

Compass allows users of the platform to engage with immersive technologies such as three-dimensional maps and augmented reality to understand what it might be like to live in a home and the surrounding community.



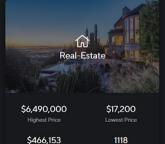






Bountiful, Utah, is a city in southern Davis County. It is bordered by Salt Lake to the south, Centerville and Farmington to the North, the Great Salt Lake to the West, and the Wasatch Mountains to the east. Bountiful has direct access to the mountains along with parks, hiking trails, museums, and recreational facilities within the city limits.

Bountiful Area Information



Average Price Total Listings
1,956 SF Residential

Average Home Size Common Home



BOULTON SCHOOL Elementary | Public

BOUNTIFUL HIGH
Highschool | Public

BOUNTIFUL JR HIGH Middle/Highschool | Public

BOUNTIFUL SCHOOL

Vlew all Bountiful Area Schools



Brighton Peak 10,500 ' | Snowfall 500"

Deer Valley Peak 9,570 ' | Snowfall 300'

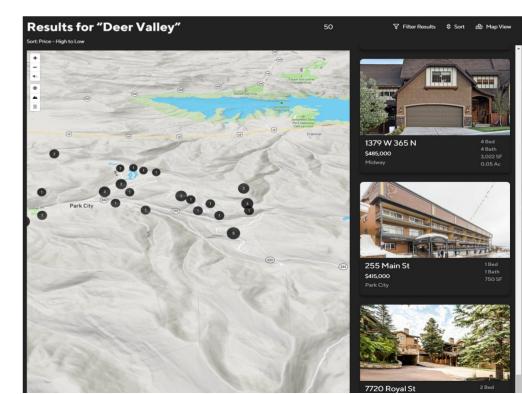


Peak 6,400 ' | Snowfall 300" Park City Mountain Peak 10,026 ' | Snowfall 355"

View All Bountiful Area Ski Resorts

Context is Everything.

Compass helps buyers, sellers, and agents understand the context of their decisions. Providing access to the right data, and using it to highlight what makes a home, neighborhood, and community special is what provides Mountain Luxury with its competetive advantage.







Data Sight

Data Sight is a web platform that empowers organizations to gain insight by analyzing large bodies of text. It allows users to find out who is talking, what they're saying, how they feel, and why.

Most of the Data We Create is Unstructured

Unstructured data doesn't fit neatly into databases and it is difficult to process. It also represents the freewheeling structure of our lives.

A Wealth of Information, If You Can Access It.

- Social media comments, reviews, employee feedback, and other text documents can offer a wealth of insight into many aspects of an organization.
- Transforming the information into a format that can be understood by computers is a difficult challenge.

Natural Language Processing (NLP) Techniques Can be Used to Analyze Text.

- NLP breakds documents into into paragraphs, sentences, and sets of words.
- Components of sentences are identified and analyzed for meaning and context.
- Once text components are identified, it is possible to map relationships such as themes, categories, and sentiment.

Part of a Puzzle.

- Text data is part of an important puzzle. When combined with other information, it can provide powerful signals of intent.
- Such signals can be utilized in machine learning models or as part of business logic to help drive customer engagement.

Data Sight is Designed to Allow Non-Technical Users to Gain Insight Into Text.

- Visualizations and dashboards provide users with context as they delve into the technical details of their data.
- The platform gives users actionable intelligence while also allowing them to dig deeper into why relationships exist and how features connect.



E Ethan

Search:

Keywords

11

Label

Very Negativ

Use-Case: Data Mine Employee Feedback.

Datico has been used summarize hundreds of thousands of emplyoee feedback comments to provide insight about company strengths and failings, manager issues, and more.

| ſ | Datico | = | 🖉 🔋 Ethan |
|----------|--|--|-----------|
| • 🔒 • | Dashboard Playground Report Assembly Data Management | Source Data HBR_the-benefits-of-laughing-in-workplace.b Summary Analyze Min: -19.48 day 4 Avg: 9.11 laugh 3 Max: 43.28 Max: 43.28 | |
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