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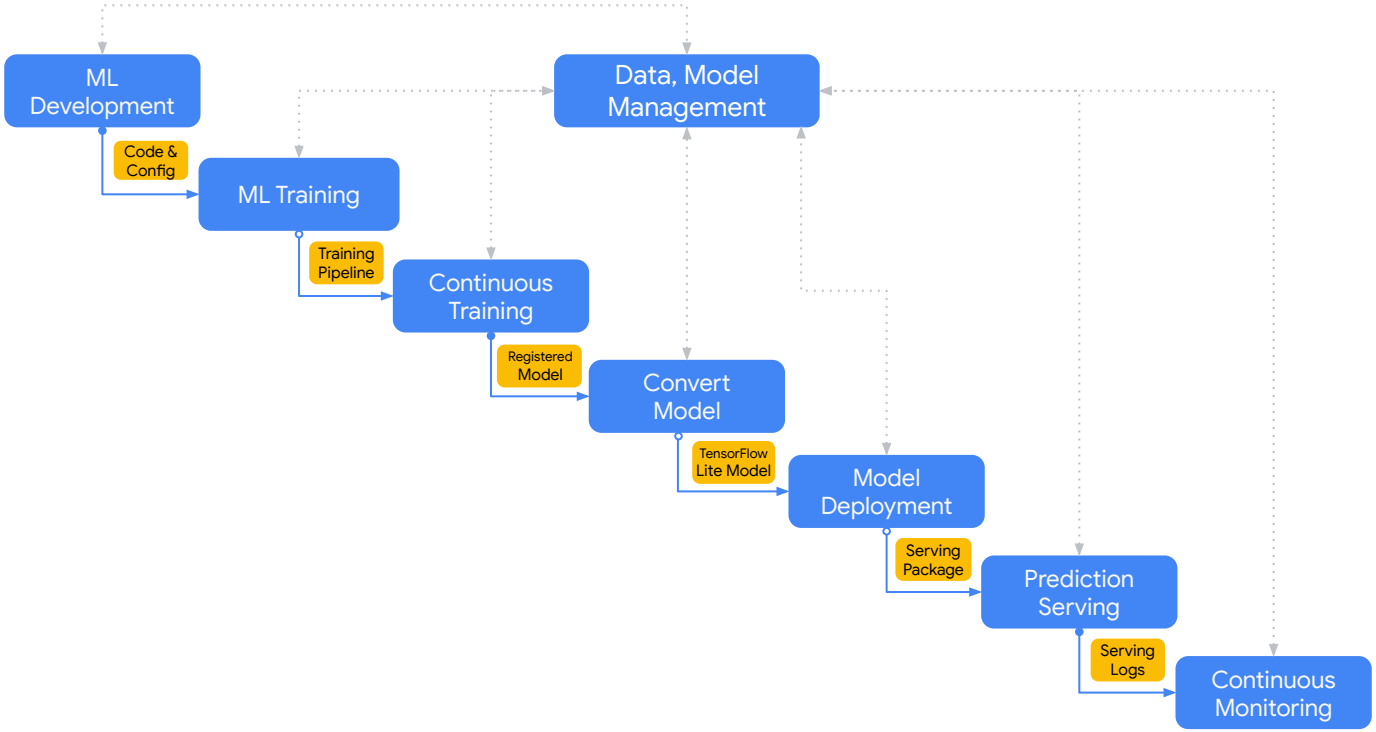
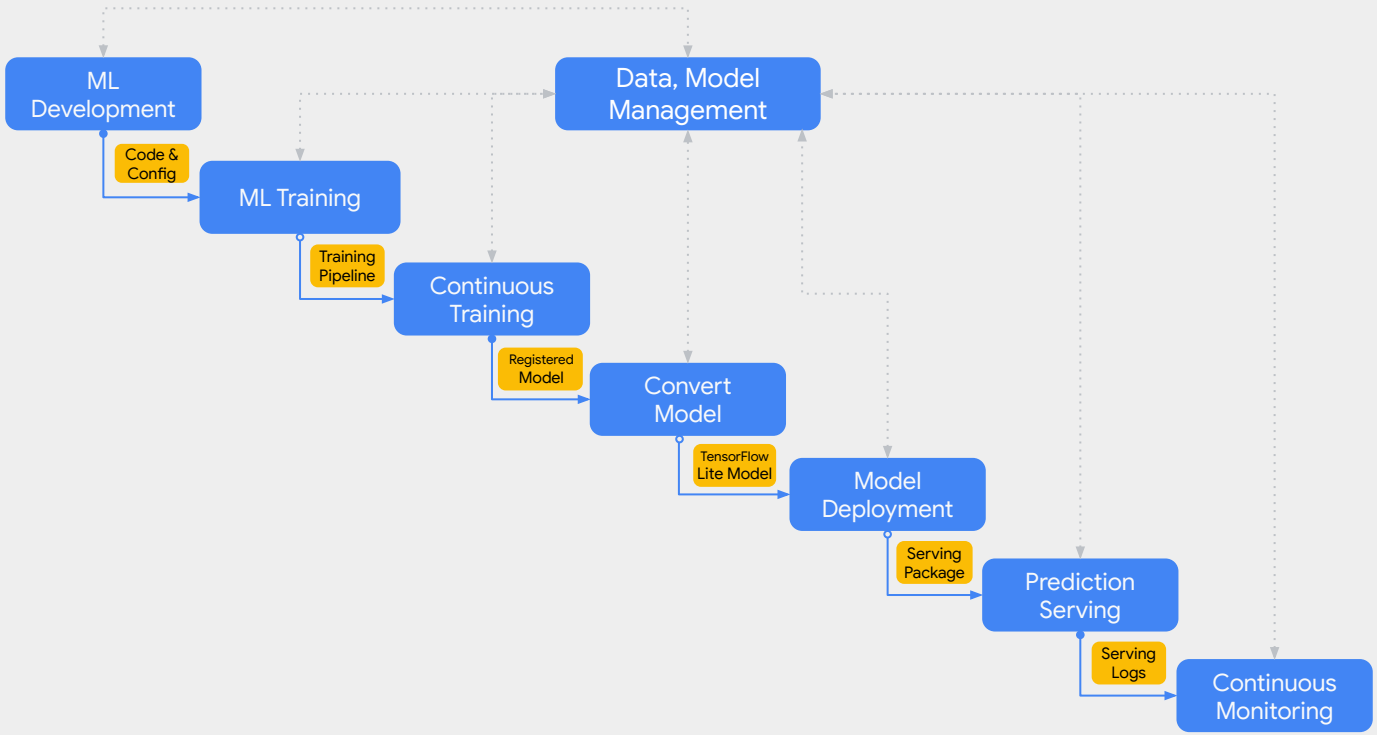
What's Next


ML Development
Code & Config
ML Training
Training Pipeline
Continuous Training
Registered Model
Convert Model
TensorFlow Lite Model
Model Deployment
Serving Package
Prediction Serving
Serving Logs
Continuous Monitoring
Data, Model Management

New Product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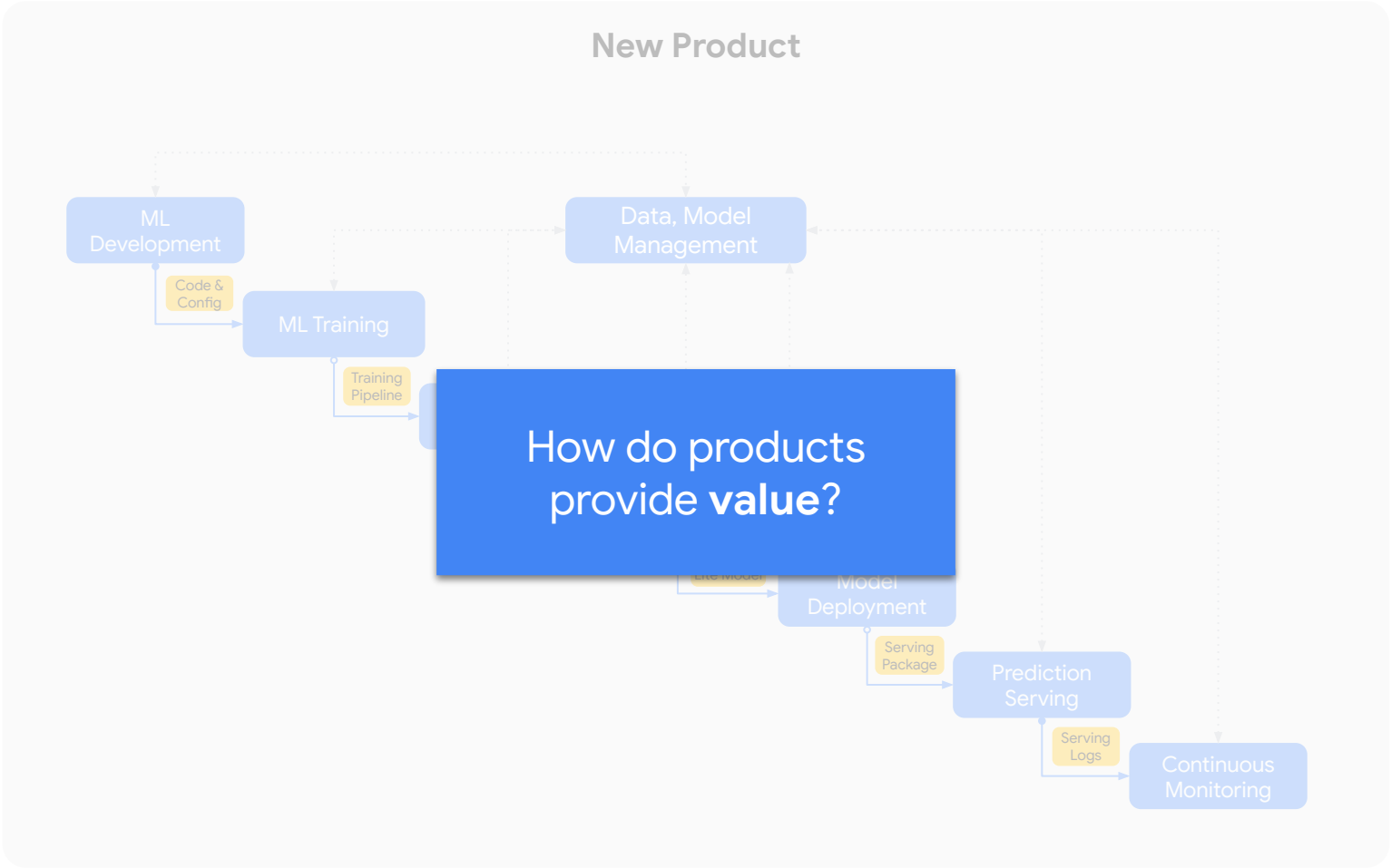
New Product
ML Development
Code & Config
ML Training
Training Pipeline
Data, Model Management
How do products provide **value**?
Model Deployment
Serving Package
Prediction Serving
Serving Logs
Continuous Monitoring

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“Jobs To Be Done”

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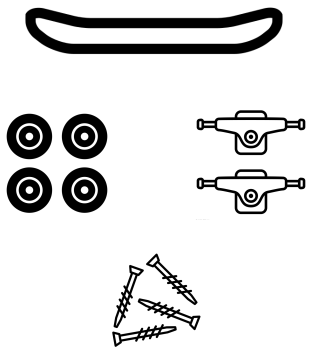
Even though customers buy this.



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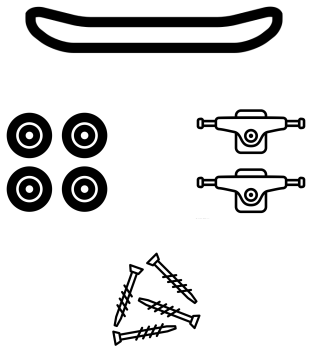
Even though customers buy this.



They really want *this*.

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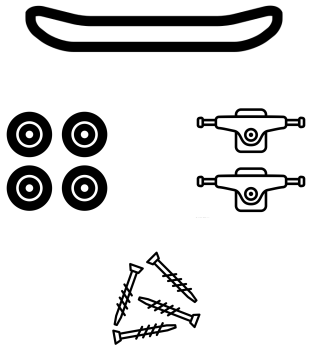
Even though customers buy this.



They really want *this*.

“People don't simply *buy* products or services, they **‘hire’** them to make **progress** in specific circumstances.”

Case Study

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TinyML Applicability

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Industry 4.0

Healthcare

Consumer Electronics

Transportation & Logistics

Wearables

Environmental Monitoring

Satellites

Smart Cities

Energy & Utility Monitoring

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Healthcare

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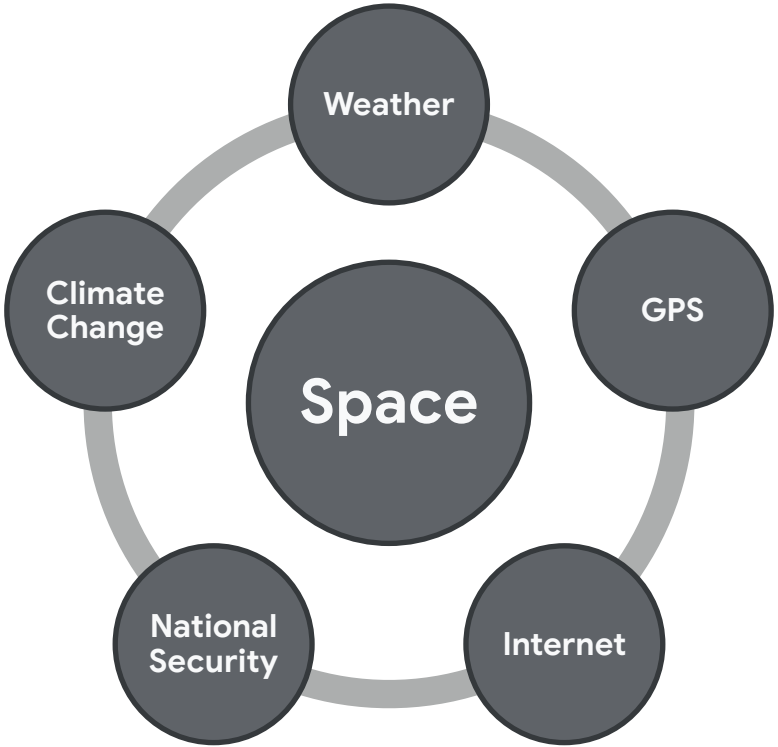
Space + TinyML Market Opportunity



Space systems inform critical decisions on Earth

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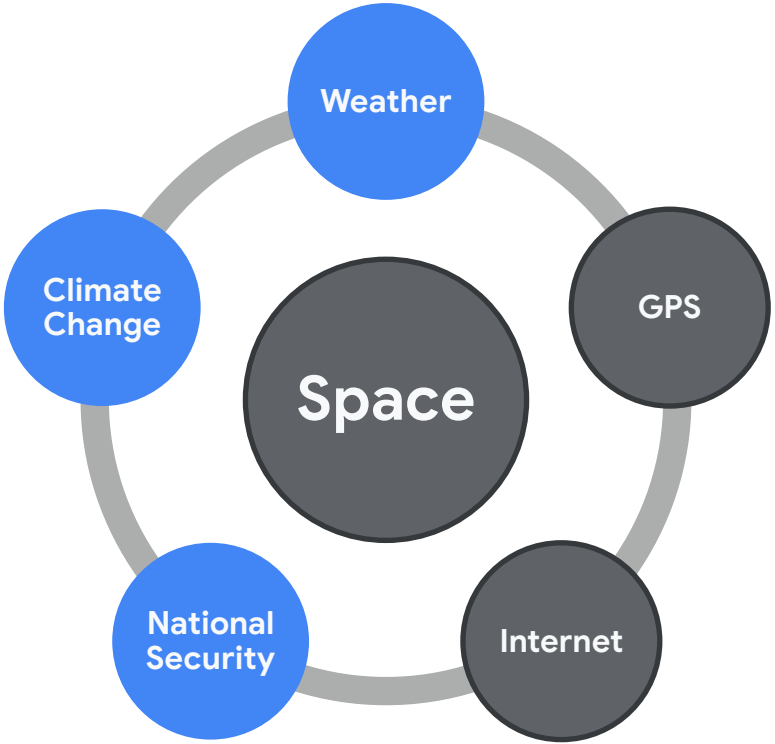
Space + TinyML Market Opportunity



Some** space systems inform critical decisions on Earth **via imagery

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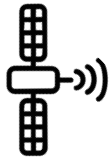
Space + TinyML Market Opportunity

Geospatial Imaging Satellites...

There are 1,500 hundred in orbit now...
But there are expected to be 50,000 by 2028



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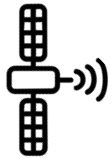
Space + TinyML Market Opportunity

Geospatial Imaging Satellites...

There are 1,500 hundred in orbit now...
But there are expected to be 50,000 by 2028

And there are **hundreds of industries** learning how to utilize satellite imagery



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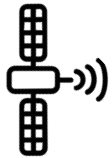
Space + TinyML Market Opportunity

Geospatial Imaging Satellites...

- low-**power**
- low-**compute**
- **latency** concerns
- **privacy** concerns



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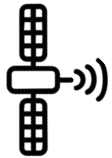
Space + TinyML Market Opportunity

Geospatial Imaging Satellites...

- What progress ("job") are they trying to make?



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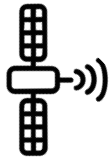
Space + TinyML Market Opportunity

Geospatial Imaging Satellites...

- What progress ("**job**") are they trying to make?
- Could they "**hire**" my product to solve it?



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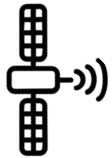
Space + TinyML Market Opportunity

Geospatial Imaging Satellites...

- What progress ("**job**") are they trying to make?
- Could they "**hire**" my product to solve it?
- How can they increase revenue?



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Example Market Opportunity

Geospatial Imaging Satellites…

Customer request:
provide image in under 1 hour

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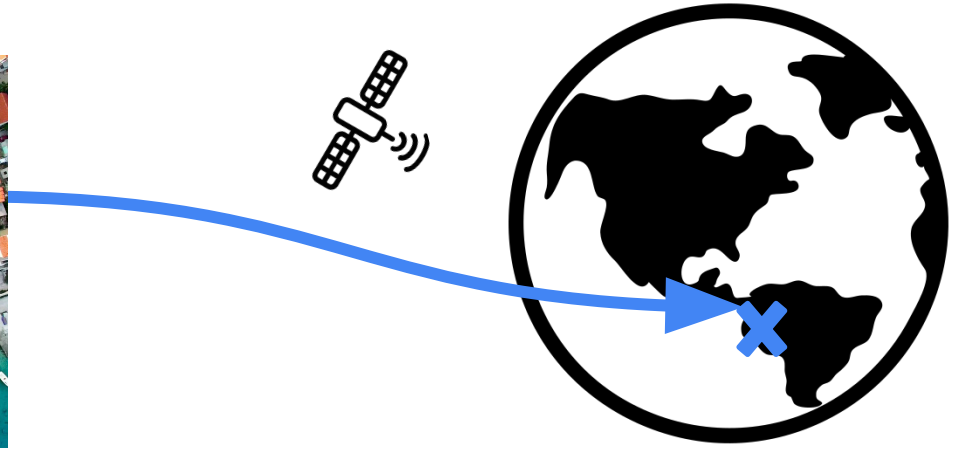
Example Market Opportunity

Geospatial Imaging Satellites…



Customer request:
provide image in under 1 hour

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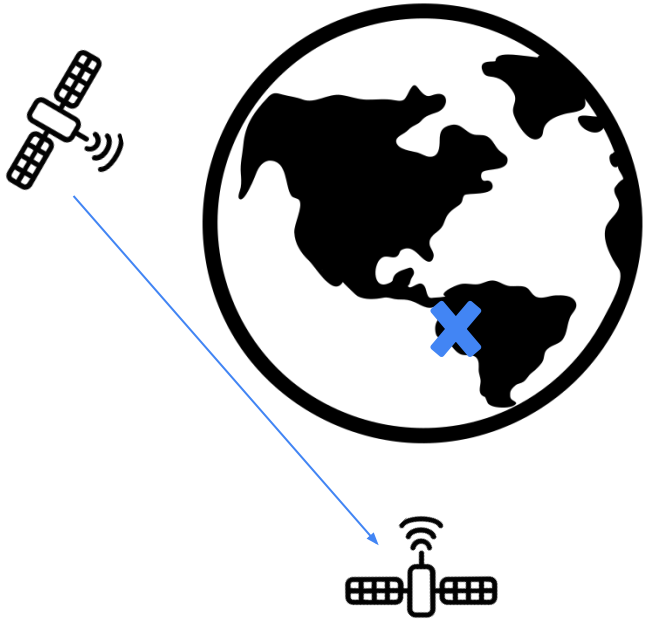
Example Market Opportunity

Geospatial Imaging Satellites...

- SpaceCo tasks one of their satellites to take image ASAP



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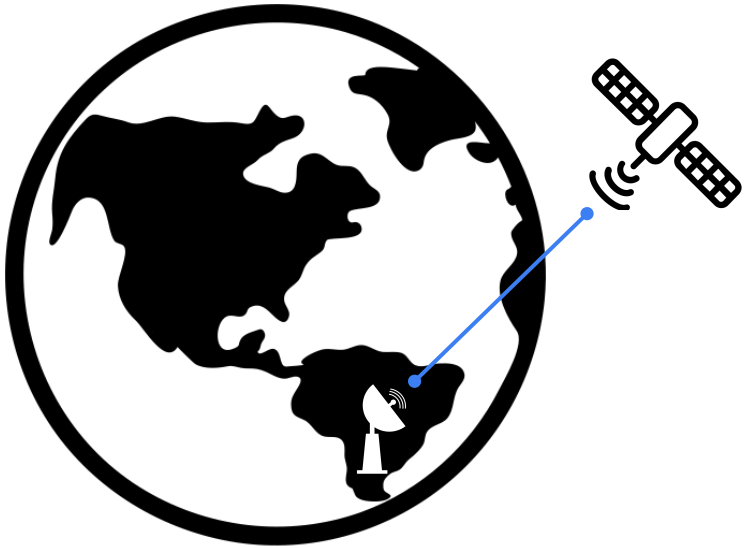
Example Market Opportunity

Geospatial Imaging Satellites…

- SpaceCo tasks one of their satellites to take image ASAP
- SpaceCo's satellite sends image back at next AWS satellite ground station



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Space + TinyML Market Opportunity

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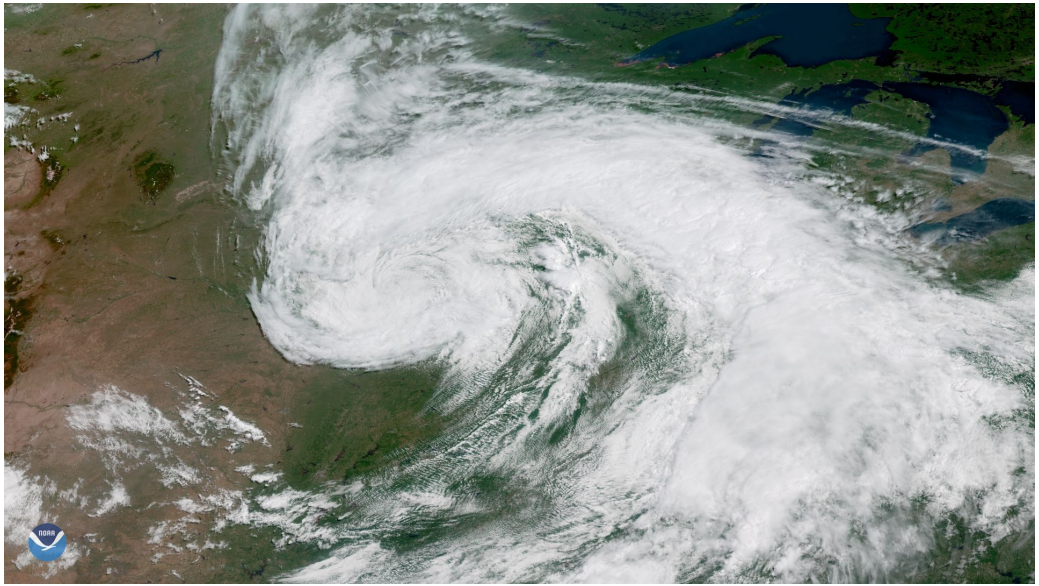
Space + TinyML Market Opportunity



70% of geospatial imagery returns with cloud coverage

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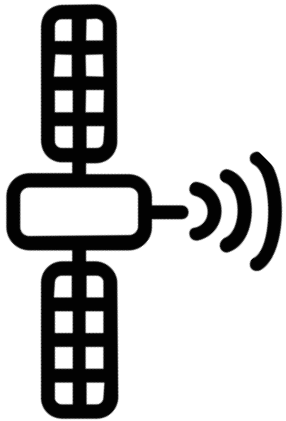
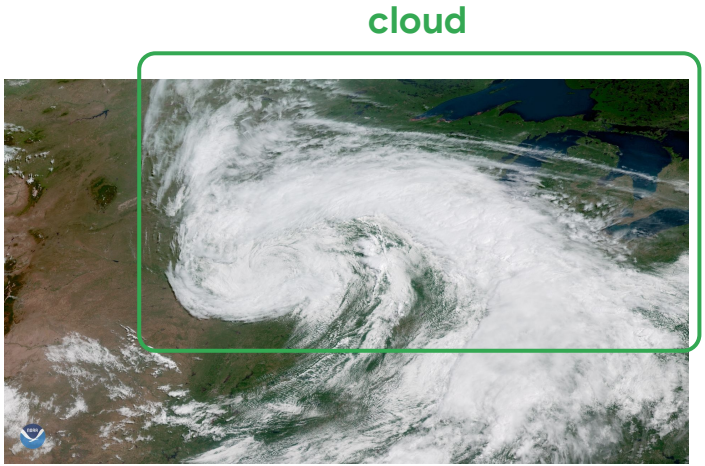
Space + TinyML Market Opportunity



wait.



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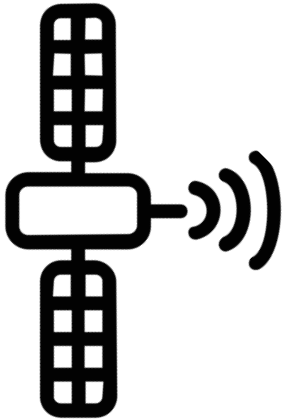
Space + TinyML Market Opportunity



wait.

no cloud

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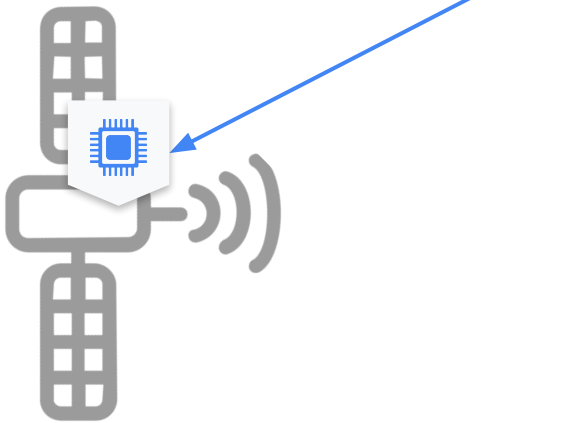
Space + TinyML Market Opportunity



License them them a **visual keyword (no)cloud recognition model** and they can deploy however they want?

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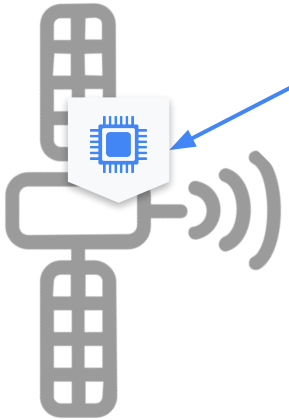
Space + TinyML Market Opportunity



License them them a **visual keyword (no)cloud recognition model** and they can deploy however they want?

"Value Created" *(e.g., $X of images are more useful!)*	**Customer Value** *(why they buy your product)*	
	Price *(what you can charge)*	**Profit**
		Cost *(difficulty to fulfill job)*

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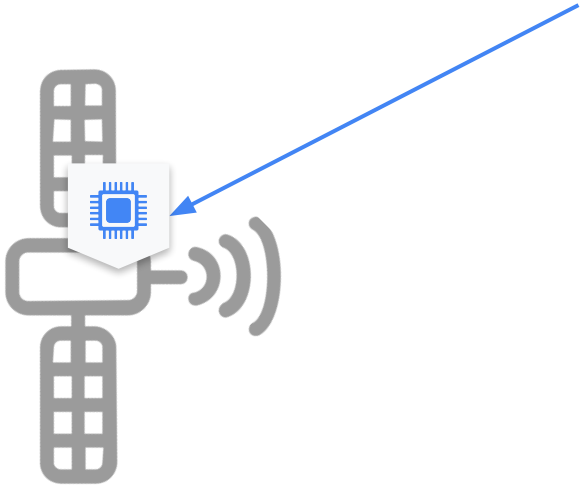
Space + TinyML Market Opportunity



License them them a **visual keyword (no)cloud recognition model** and they can deploy however they want?

SpaceCo's response: **"SO, WE NEED THIS..."**

*"**but** we can't afford ML PhDs to maintain this if we need to change something?"*

*"**but** it would be cool to know if there are white vans in the image too..."*

*"**but** what if radiation degrades our camera over time?"*

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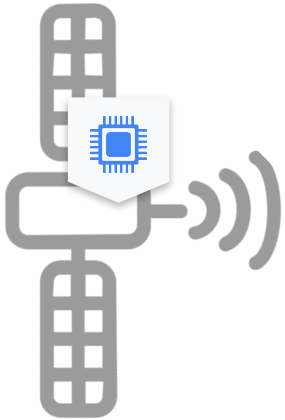
Space + TinyML Market Opportunity



Ah! there's a **full stack problem** here.

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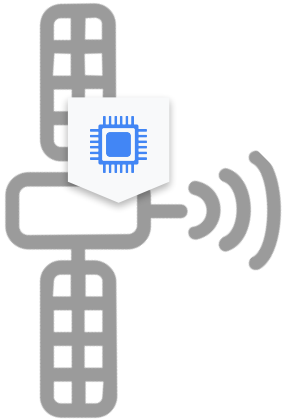
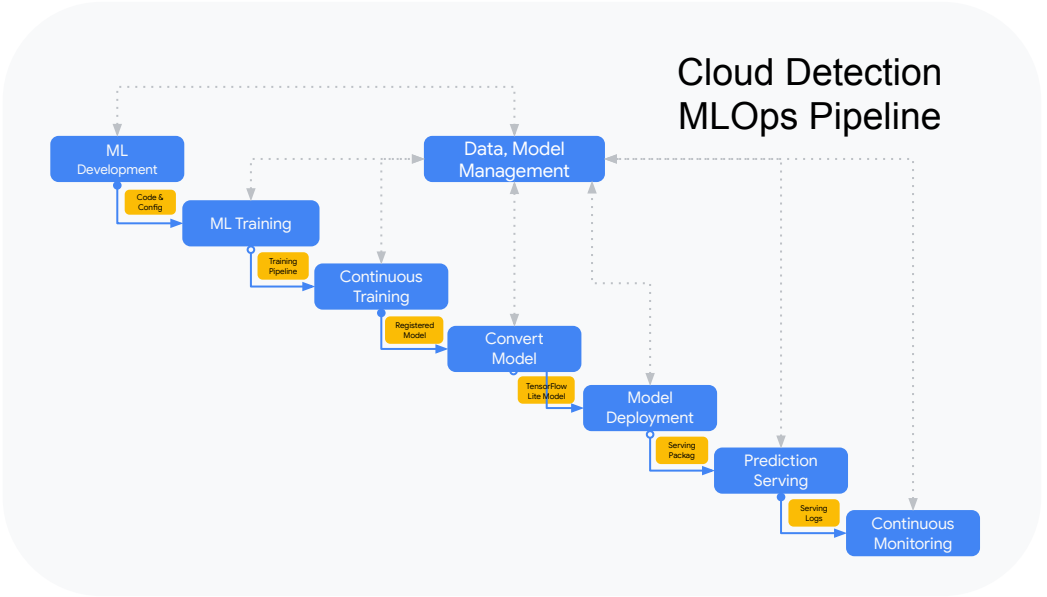
Space + TinyML Market Opportunity





Cloud Detection API

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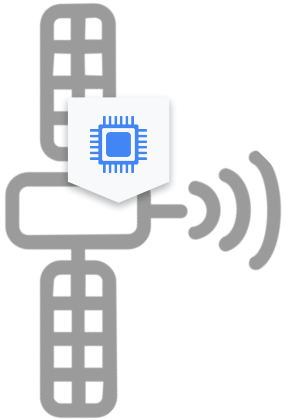

NoBadImages Inc (*NBI, Inc*)

Mission:
Building and deploying TinyML models and workflow management solutions to democratize satellite imagery and bring about world peace.

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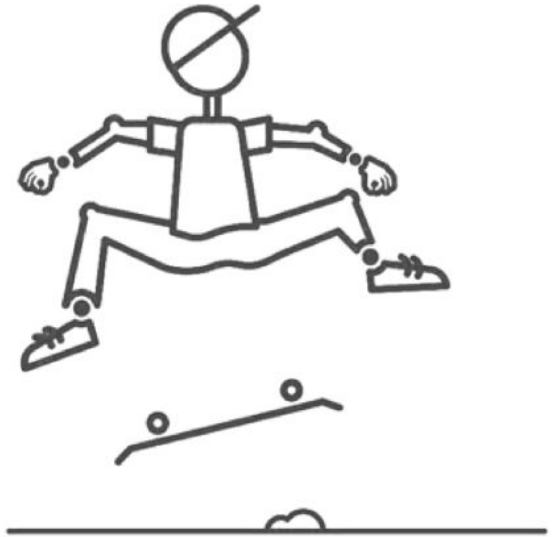
Successful Product!



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Space + TinyML Market Opportunity

ML Engineer

ML Researcher

Data Scientist

Data Engineer

Software Engineer

DevOps

Business Analyst

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Space + TinyML Market Opportunity

ML Engineer

ML Researcher

Data Scientist

Data Engineer

Software Engineer

DevOps

Business Analyst

Accountant

Lawyer

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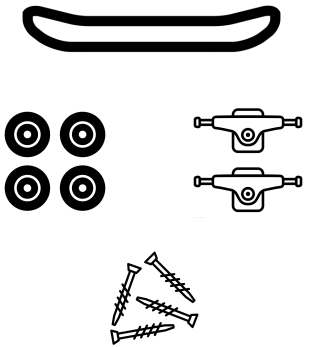
Summary: Focus on “Jobs To Be Done”

Even though customers buy this.



They really want *this*.