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Forecasting with artificial intelligence

How to build AI forecasts that are transparent and adoptable

Hi, we're Granularity

Granularity is an AI Demand Forecasting startup focused on bringing the best demand forecasts to planners.

We're made of:

✓ Data Scientists + Engineers
✓ Certified Forecasters

As featured in:

TORONTO STAR

DMZ

F6S

And backed by:

CREATIVE DESTRUCTION LAB

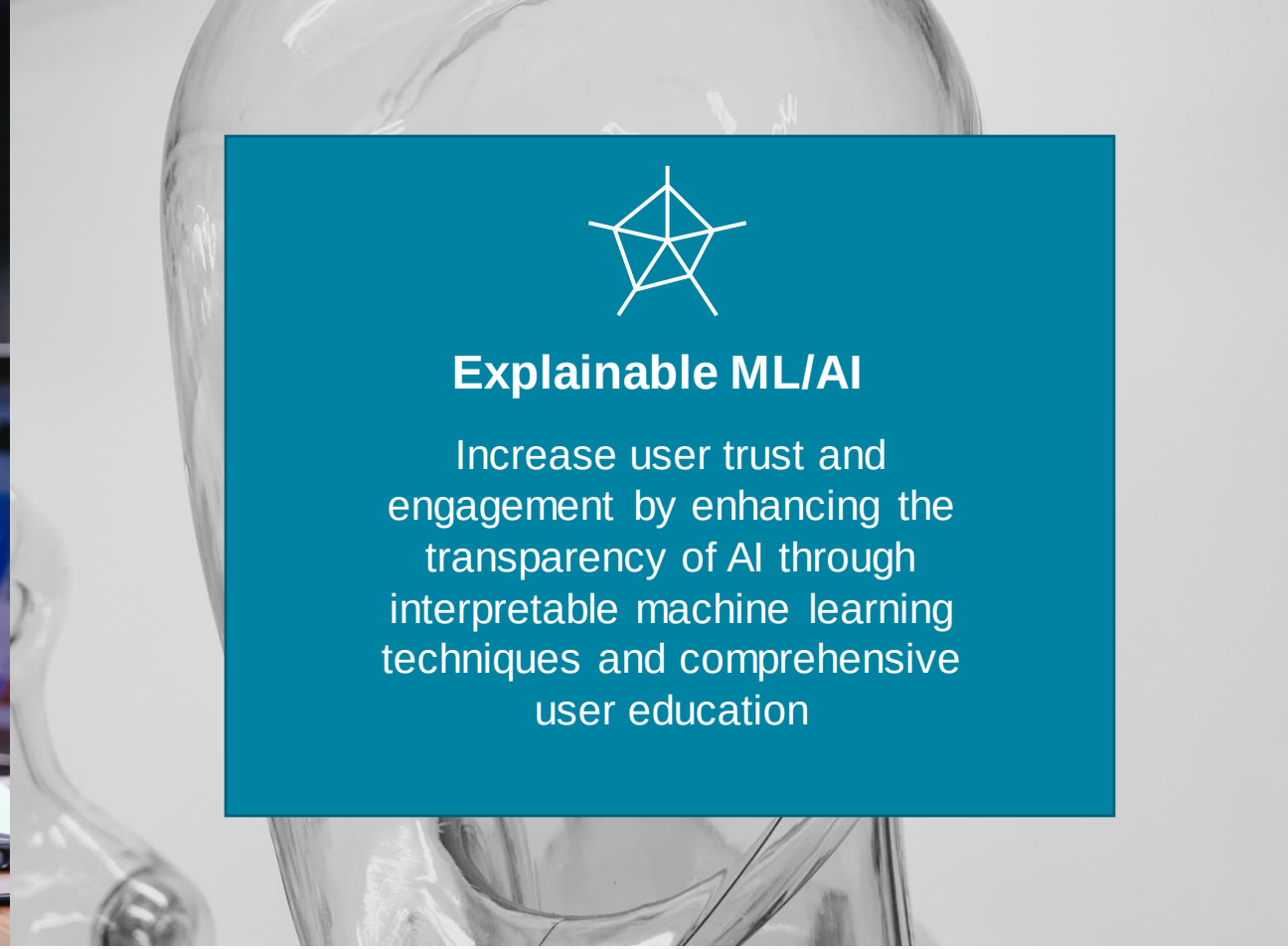
Microsoft for Startups

Google for Startups

Granularity.ca

Human-Centred MLOps

Accelerate model adoption by implementing core MLOps principles, fostering collaboration, and appointing a dedicated champion for transformation.



Explainable ML/AI

Increase user trust and engagement by enhancing the transparency of AI through interpretable machine learning techniques and comprehensive user education

Building AI tools with humans in the loop

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With effective change management and MLOps, the ML team worked with the planning team to boost forecasting accuracy by 35% and improve decision-making.

Accelerating Model Adoption with MLOps and Human-Centric Integration

Context

- The customer faced challenges in data discrepancies and infrequent updates, impeding the effectiveness of their forecasting model due to insufficient MLOps practices.
- The initial model lacked alignment with the planning team's needs, resulting in skepticism about its value and usability.

Solution

- Implemented MLOps principles by automating data preprocessing, model training, and deployment while ensuring scalability to enhance accuracy and usability.
- Fostered collaboration among data scientists, demand planners, and other stakeholders, appointing a dedicated liaison to champion process transformation and drive adoption, effectively bridging the gap between the model and planning team requirements.

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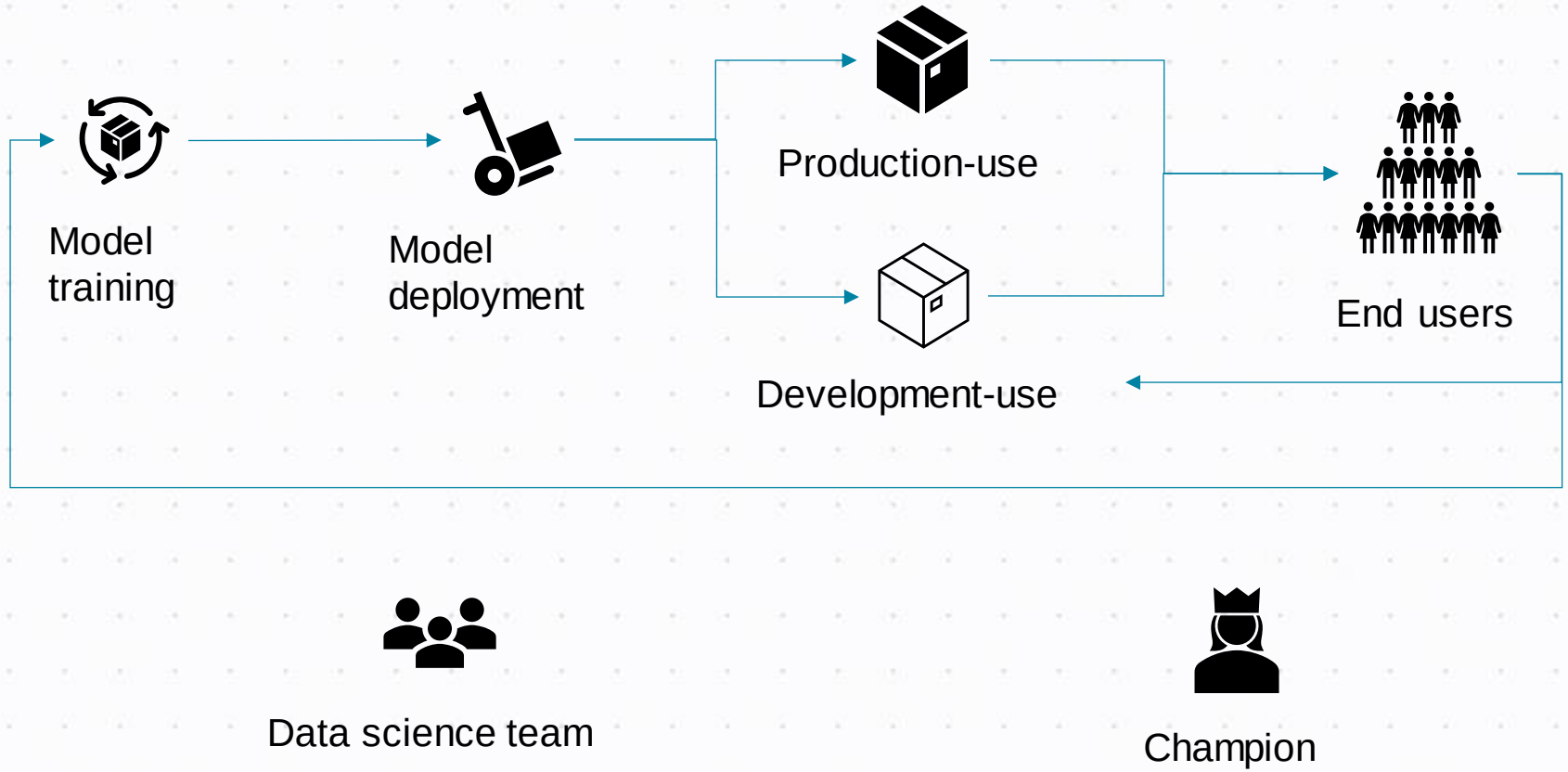
Accelerating Model Adoption with MLOps and Human-Centric Integration

Process Improvements

✓ Champions to lead engagement

✓ User-centered after model creation

✓ End users engaged with training and enhancements



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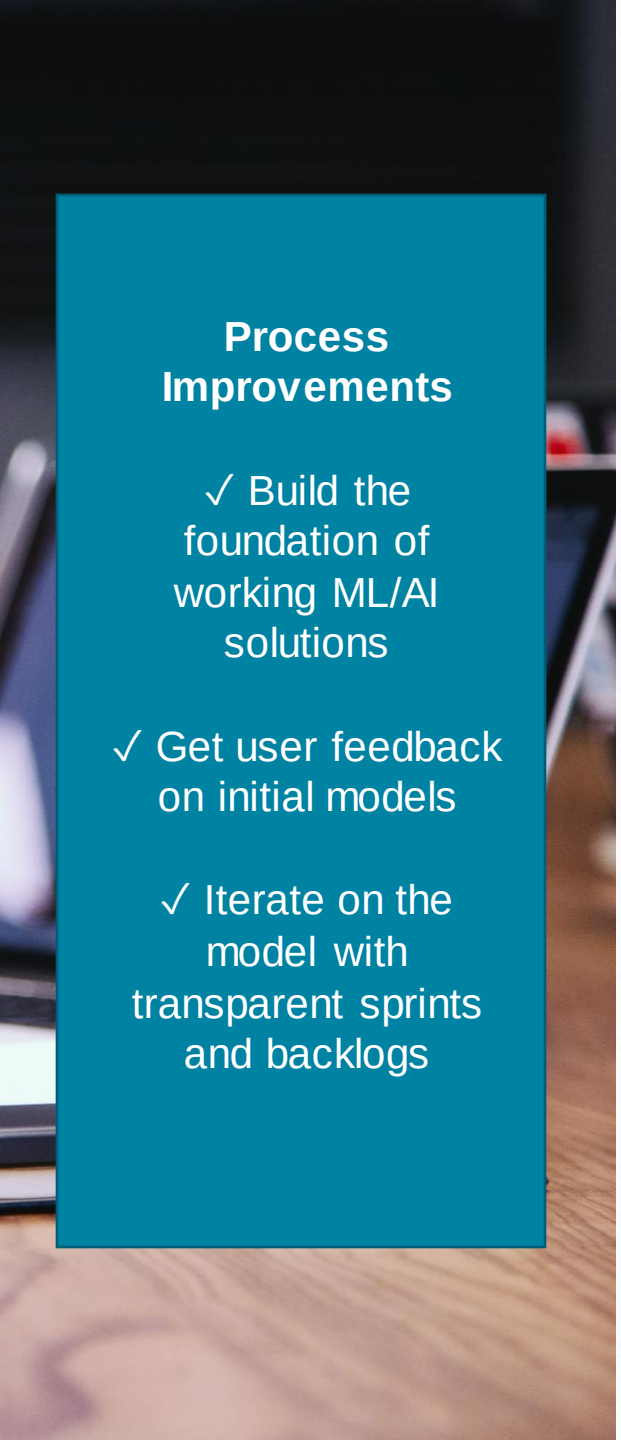
Accelerating Model Adoption with MLOps and Human-Centric Integration



Process Improvements

✓ Build the foundation of working ML/AI solutions

✓ Get user feedback on initial models

✓ Iterate on the model with transparent sprints and backlogs

Shared Ownership:
Sprints are open with business users on backlogs and priorities

Direct Model Feedback:
User responses to data and decisions are inputs to the model

Build Experiences:
Get the model to users. Enable experimentation and sandboxes

Create the Foundation:
A working ML/AI model that meets initial assumptions

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Boosting Model Adoption through Enhanced Transparency in Demand Forecasting

With enhanced model explainability, the ML team was able to achieve seamless integration of AI-driven demand forecasting into business processes.

Context

- The retail organization faced skepticism and low adoption of their demand forecasting model due to its "black box" nature and lack of transparency.
- Stakeholders expressed concerns about understanding and interpreting model outputs, which hindered user trust and adoption.

Solution

- Employed interpretable machine learning techniques, such as feature importance and partial dependence plots, to help users understand the relationships between input variables and model predictions.
- Provided clear documentation and user training on the model's inner workings and assumptions, increasing transparency and user trust in the forecasting model

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Boosting Model Adoption through Enhanced Transparency in Demand Forecasting

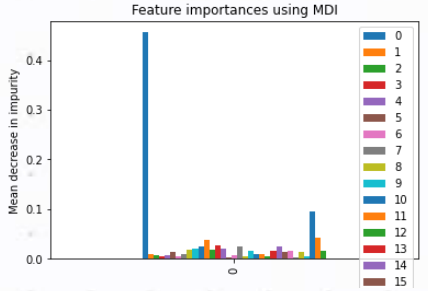
Explainability Improvements

✓ Deploy interpretations to all users

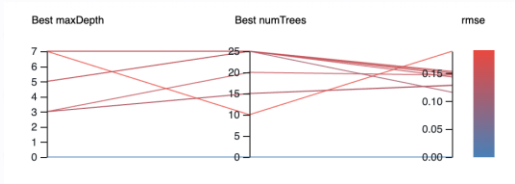
✓ Simulate the effects of changing variables

✓ Over-document and enable everyone

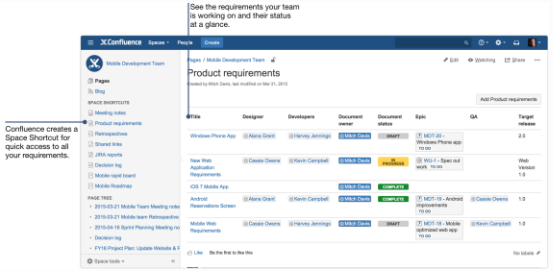
Share metadata and feature importance or partial dependencies to users



Allow for user simulations of variables in dashboards



Create shared documentation and process information



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