

Agile & Transformation Analytics:

A Perfect Marriage of Data Science & Agile Practices

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AUTODESK.

- Data Science & ML Intern
- MCP – Engineering Practice
- Agile Practice – Alicia Wong



Agile & Transformation Analytics

Understanding the Project

My MVP

WHAT



WHY



HOW



Target:

- **3** Business Divisions
- **100s** of Products
- **1000s** of Teams
- **1 tool** for Insights

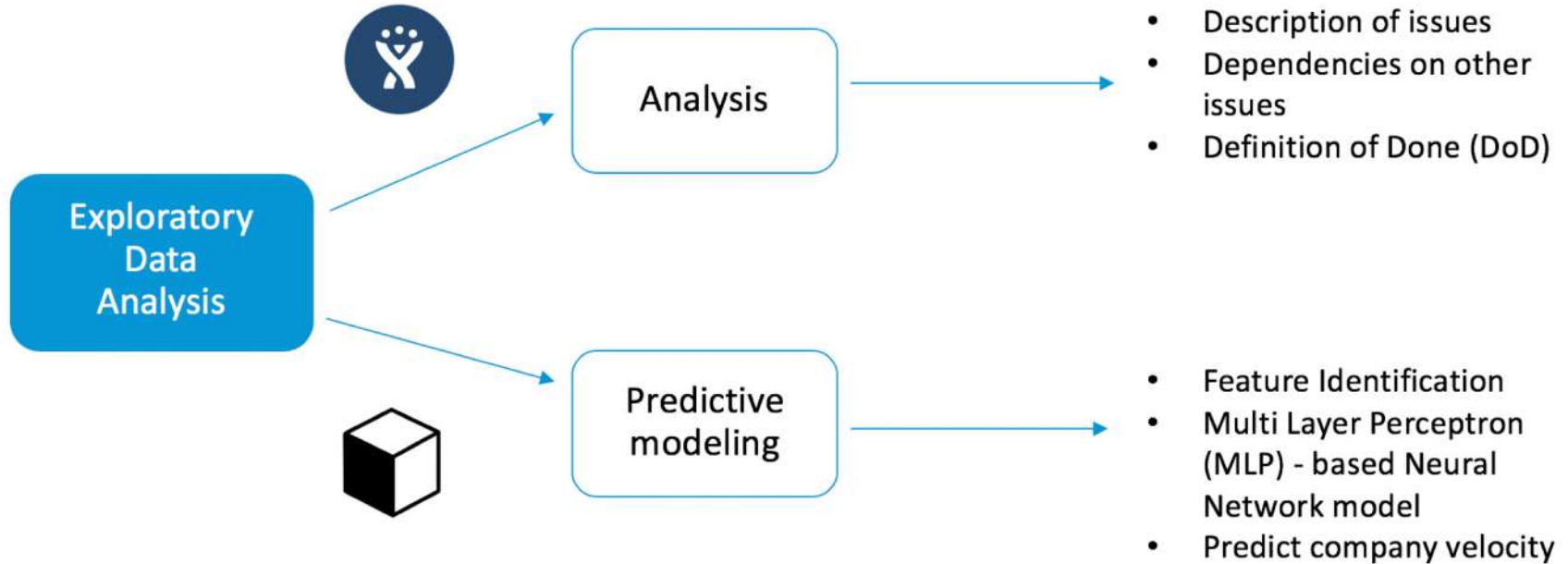
Goals:

- Evaluate & Guide Teams
- Data-Driven improvement for Team performance
- Move from Data-at-the-center to **Knowledge-at-the-center**

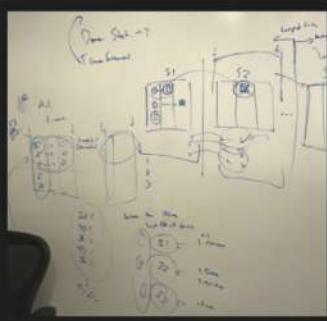
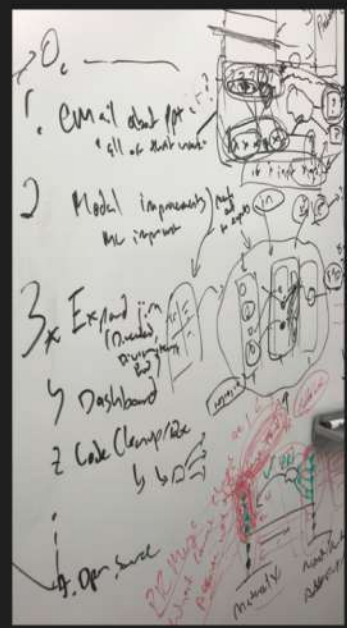
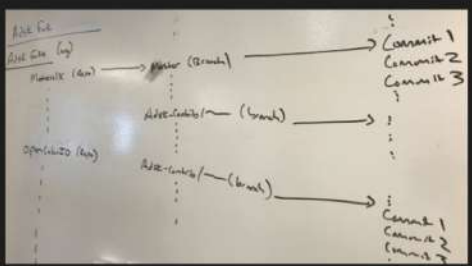
Methodology:

- Learn Agile by *being Agile*
- Collaborate with the Agile Practice, Data Scientists, & Machine Learning Engineers
- Iterative Research & Development

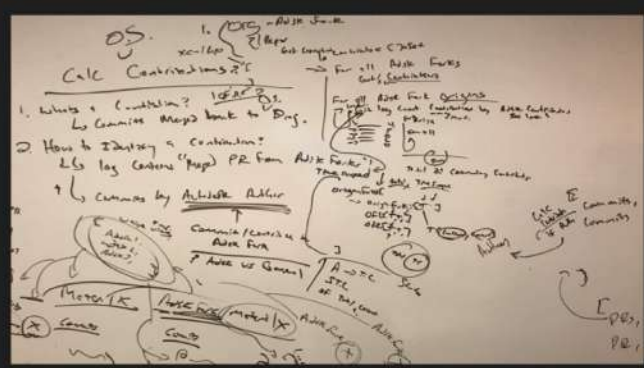
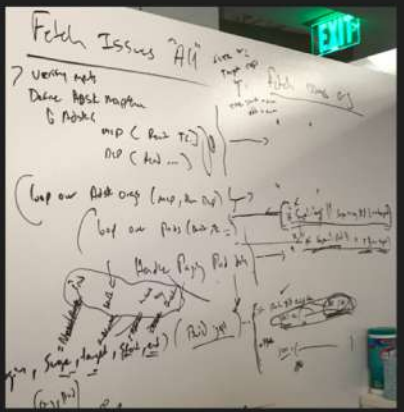
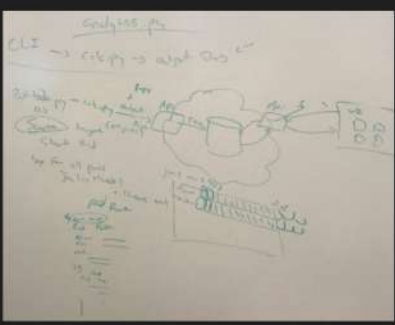
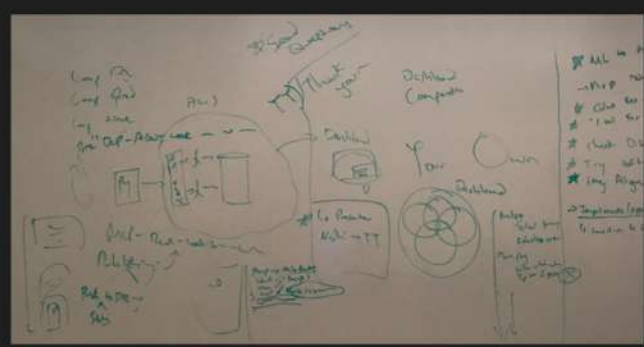
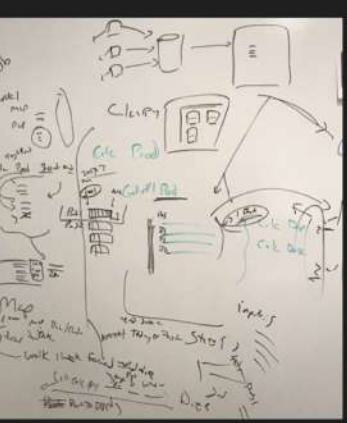
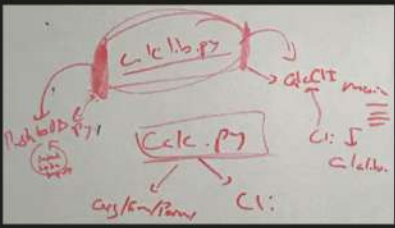
Transition from Data to knowledge



Project Workflow



Handwritten notes on a piece of paper. The text is mostly illegible but appears to be a list of items or a short report.



```
|SFOC02V13MNHTD8:src t_menon$  
|SFOC02V13MNHTD8:src t_menon$  
|SFOC02V13MNHTD8:src t_menon$ python analytics.py div MCP 2018-07-25 2018-07-28; python analytics.py div DCP 2018-07-25 2018-07-28; python analytics.py  
div DPE 2018-07-25 2018-07-28
```

----- FETCHING DATA -----

MCP : Tinkercad (TC)

Fetching issues from page 1

----- STATISTICAL ANALYSIS OF DATA -----

[1] Found no issues that were flagged as a dependency.

Average age of user stories flagged as dependency: 0 days. (Assumption : Updated date on JIRA is closed date for user story)

Count of user stories flagged as dependency: 0

Total number of user stories: 1

[2] Found no stories with missing description.

Count of user stories missing description: 0

Total number of user stories: 1

Percentage of user stories missing description: 0.00%

----- CODE PERFORMANCE EVALUATION -----

0.05 seconds process time

6.90 seconds wall time

----- FETCHING DATA -----

DCP : Revit (REVIT)

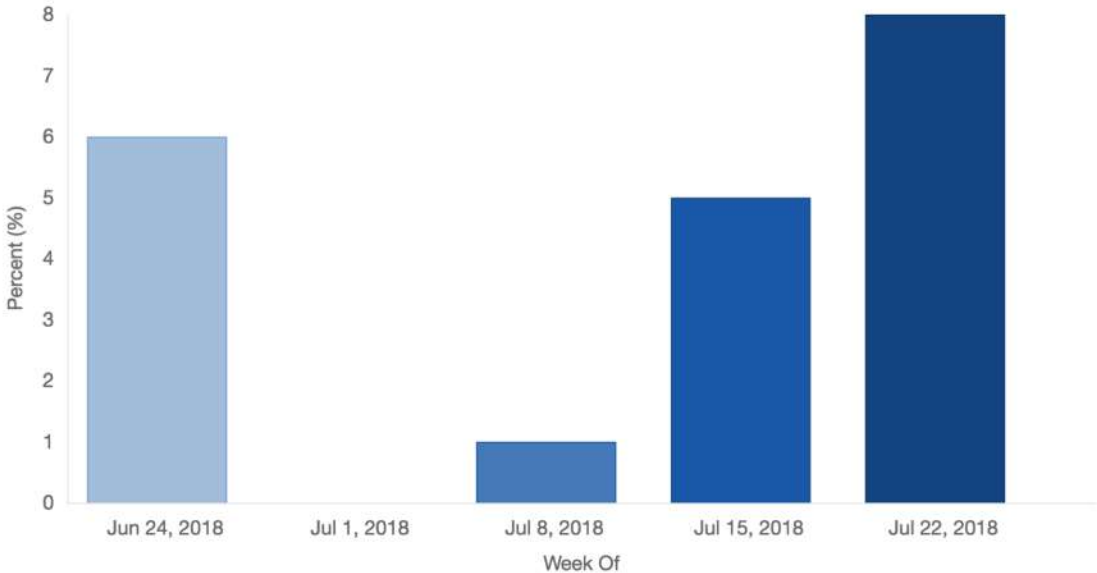
Fetching issues from page 1

Fetching issues from page 2

Fetching issues from page 3

BIM 360 Docs

Stories Marked as Dependency



Agile & Transformation Analytics

Understanding the Project

My Stretch Goal

WHAT



Target:

- Evaluate & accelerate company's focus shift from proprietary to open-source
- Track upstream Autodesk contributions to open-source projects, specifically in Media & Entertainment

WHY

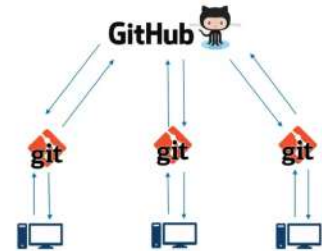


open source

Goals:

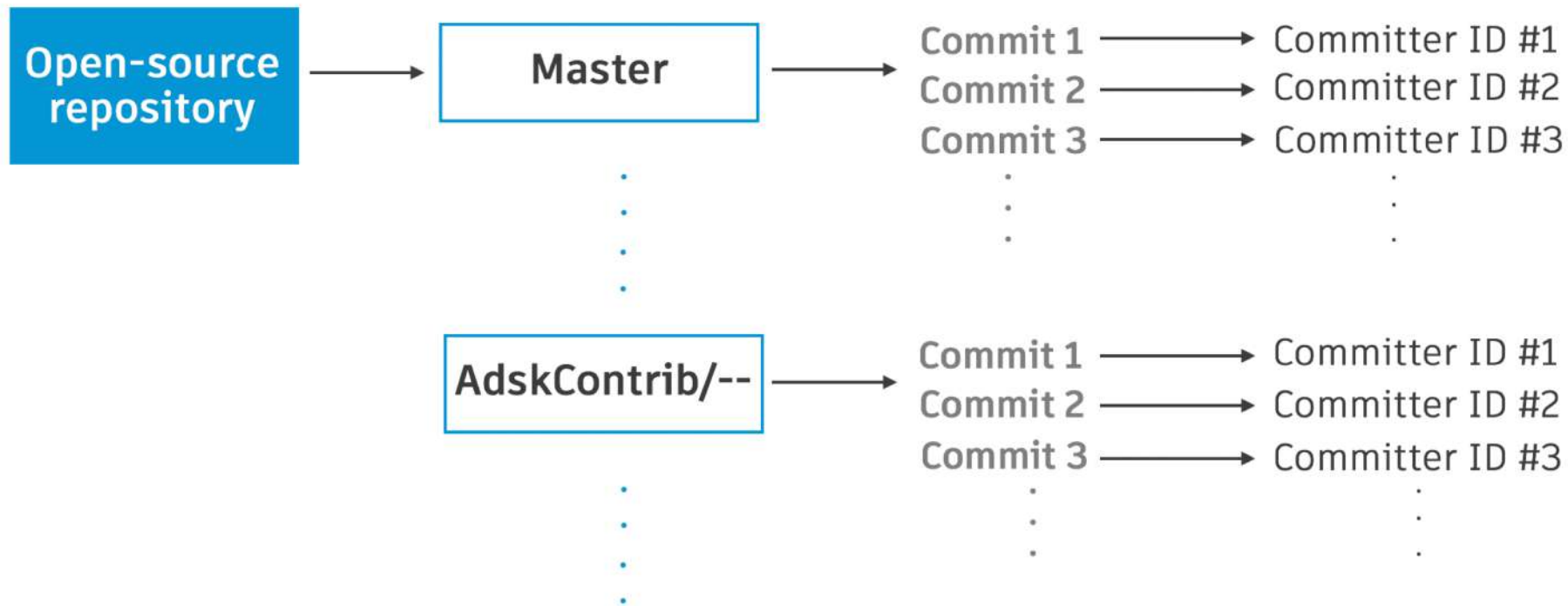
- Collaboration needs to be the new normal
- Earn a reputation, forge partnerships, and influence direction of projects

HOW



Methodology:

- Analyze Github repositories in **'autodesk-forks'**
- Collaborate on understanding goals and challenges
- Delivering PoC to facilitate implementation in future



1. Identify “Merge Pull Request #XXX from Adsk-forks/--- ”
2. Single PR consists of bundle of commits
3. ‘Owning our own’ : Cross-reference Adsk-forks committers to repository

Expanding
Skillset

Networking

Deploying to
Production

Documentation of
projects, internal tools
and resources



Mapping of products to
divisions within
Autodesk

Disparity in
Tools Used

Complexity in
Navigating Internal
Resources

Big Data?
No, Bad Data!



Thank you!

Questions?



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Georgia Tech
Class of Dec '18



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