# Delivering a Successful ML Project Concept to Production

Sanjay Rakshit Transwap

### Whoa...not an ML talk?

- We are not going talk tech today We will talk process Why?
- A failed project has consequences
  - Commercial Sunk costs
  - Reputational Market perception of the product, company
  - Opportunity Market, to do cooler projects
  - Credibility Can the team deliver?
- So we need more than technical skills to successfully deliver a project

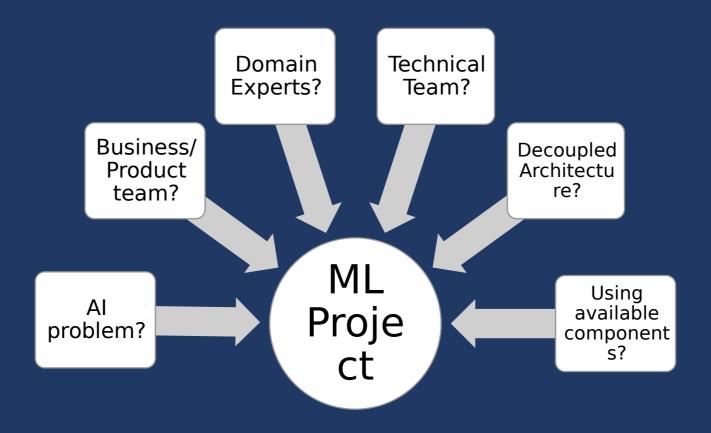
# Attributes of an ML engineer

- Technical
- Customer focussed
- Commercial acumen Right model, not the perfect model
- Creative
- Team player
- Good communicator

### Who decides?

- Who decides whether a project is successful?
  - My Boss? No
  - ML Engineer? No
  - Data Scientist? No
  - Product Manager? No
  - Project Manager? No
  - Research Team? No
- It is the Customer Only they decide whether a project is successful

# Key Questions and participants



We assume that we are working on an Al problem

# Case study: Detecting fakes

 The project I am going to talk about today – Detect fakes/look-alikes

- Problem statement:
  - Scrape websites and detect trademark and design infringements

# Client Workshop (Business, Domain and Tech)

Customer decides success but are they always right?

- Requirements Business User Stories (BUS)
- Business Process Mapping
- Data sets
- Source of the datasets
- Format of the evidence
- \*What will be done with the evidence
- How will the evidence be pres

Requireme nts

#### Acceptance Criteria

- Success criteria Acceptance tests
- Model Evaluation Metrics
- •What is a look-alike? What does mean?

- Local or Remote
- Packaging
- Installation instructions if local
- Associated documentation
- Demos

Deploymen t

# Development (Tech, Domain, Business)

- System Architecture (no. of models needed)
- •Interaction between the outputs of the models
- End-to-end pipeline overview
- Feature engineering
- •Deployment infrastructure (containerisation)
- \*Determine evaluation criteria

Design & Analysis

# Implementat ion

- Model development
- Model re-training (from demo results)
- Deploy as per design
- •QA
- Role-play (Client, Business, Tech).
  This helped tease out any gaps in requirements and implementation.

- Weekly demos
- Send the evidence sheet prior to the demo
- Evaluation was somewhat manual. Outliers were preferred in a slight expense of catching the obvious ones.
- Visualised the evidence files for easier and pictorial presentation

Weekly check-in

## Ask

- Target: Who are our customers?
- Need: Problem statement? Value? When do they need it?
- Dataset: Do we have adequate datasets? What is their source? How reliable are they?
- UX: How will the final output be presented?
- Evaluation: Evaluation criteria

# Attributes of an ML engineer

- Technical
- Customer focussed
- Commercial acumen Right model, not the perfect model
- Creative
- Team player
- Good communicator

# Thank You