

Data Science Project

How to scope a project

1. Identify a problem to solve
 - Can be anything (silly)
2. Data
 - What type of data and where can I find it.
 - Where can I store the data.
3. Model
 - What kind of model are we using.
 - Start with simple then move to complex models.
4. Deployment
 - How will users interact with outputs.
 - Predictions saved into a database?
 - Create a dashboard?
 - Build an app?

Example 1

Shelfscanner (AI-powered book discovery app)

1. Identify a problem to solve
 - Not recognising books in libraries and book shops
 - How to solve?
 - Put in reading preferences and good reads data
 - Take a picture and it gives recommendations and tells you what books are there.
2. Data
 - Good reads data
3. Models
 - Squarespace domain
 - Postegre SQL (database) (stores user reading history and preferences)
 - Molter Middleware (image uploads from phones, device-based session management no accounts)
 - AI pipeline
 - No models trained
 - OpenAI's GPT40 vision API for extracting bookspine text and whats on the shelf.
 - This API is expensive, added limits.
 - Uses Google vision api as a fallback.
 - GPT40 to generate personalized recommendations based on user preferences and history.
4. Deployment
 - Versal (serverless deployment).
 - Simply connect Versal to your Github Repo.
 - Vibe code web development using ExpressJS backend and React front end.
 - UI simple mobile friendly web application.

What ill learn

- Learnt about the full AI product life cycle.
- Data ingestion
- API rate limiting
- Fallback strategies
- Security
- Cost Management
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