



WinMaxxers



- Team Members Names
 - Quintin Ampofo
 - Cole Scott
 - Damone Washington
 - Darell Barnes
- Future Event Prediction

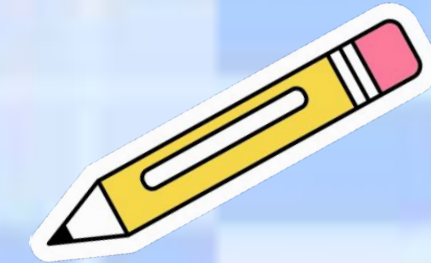


https://drive.google.com/file/d/1RSo9XUcA_7guj58Akhidq8lYweRKV9hm/view?usp=sharing

<https://hackhpc.github.io/admi26>

GOALS

- Wikipedia-only forecasting — predicting emerging concepts using only Wikipedia structure
- Knowledge graph signals — pages as nodes, links/categories as relationships=
- Explainable modeling — simple, transparent scoring instead of black-box ML
- Historical growth patterns — using past snapshots to detect rising concepts



THemes

- Our project explores whether the structure of Wikipedia itself can reveal tomorrow's important ideas. By treating Wikipedia as a living knowledge graph—where pages are nodes and links, categories, and references form the connections—we analyze how concepts grow and evolve over time.



DARELL BARNES

DATA CLEANING & PREP

- Responsible for Wikipedia data sourcing, including simulated historical snapshots.
- Collect Wikipedia data and simulate historical snapshots
- Extract links categories references for graph construction



COLE SCOTT

MODELING & FORECASTING

- Designs the simple, explainable future-importance model
- Design heuristic model using transparent weighted features
- Compute future importance_scores and rank emerging concepts



TEAMWORK MAKES



THE DREAM WORK!



DAMONE WASHINGTON

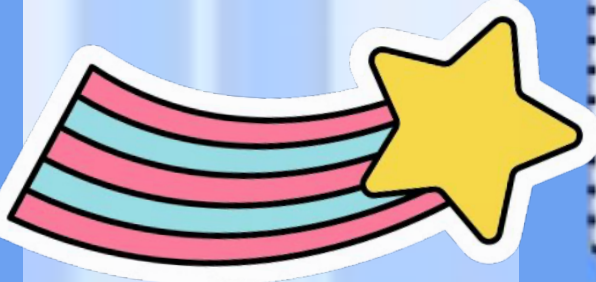
GRAPH & SCORING

- Builds the knowledge graph and computes all structural features
- Build Wikipedia graph from pages, links, and categories
- Compute graph features like PageRank, degree, and growth



QUINTIN AMPOFO

, VISUALIZATION

- Owns the front-end, visuals, and storytelling.
 - Build notebook structure with clear charts and explanations
 - Create graph visualizations and craft the final story
- 
- 

WinMaxxers Road to Glory

Milestone 1 — Project Definition and Repository Setup

This is the initial environment setup and Ideation

- Create a Github repository to track the project
- Define the scope of our project
- Define key data points to extract
- Assign team roles.

Milestone 2 — Data Acquisition

Data cleaning and preparation for analysis

- Select Wikipedia snapshots to acquire
- obtain them via API calls or Web-scraping and Parsing
- Extract key data points, metadata, and links

Milestone 3 — Knowledge Graph Construction

Setting up a Knowledge Graph so that obscure or ambiguous relations can be found and converted to a feature (eg, clusters)

- Create node (wikipedia articles) and edge (article-to-article links)
- Build a graph using Networkx
- Validate graph integrity and connectivity

Milestone 4 — Feature Engineering

Extracting the features from the graph

- Extract Features from graph such as in-degree, out-degree, and page rank
- select ML algorithm to train model.
- Normalize these values to train a simple prediction model

Milestone 5 — Scoring Model

- Align pages across snapshots.
- Generate labels using future growth measurements.
- Create train/test splits based on time periods.
- Train baseline models.

Milestone 6 — Validation

at this stage we essentially start to build the narrative / story

- Identify emerging concepts.
- Analyze why concepts grow.
- Study community evolution and cluster growth.
- Discover future knowledge hubs.

Milestone 7 — Polish

- Build interactive graph explorer.
- Build timeline controls and time-travel view.
- Create prediction dashboard.
- Add search and concept exploration tools.
- Develop final presentation deck.
- Conduct demo rehearsals and judging preparation.

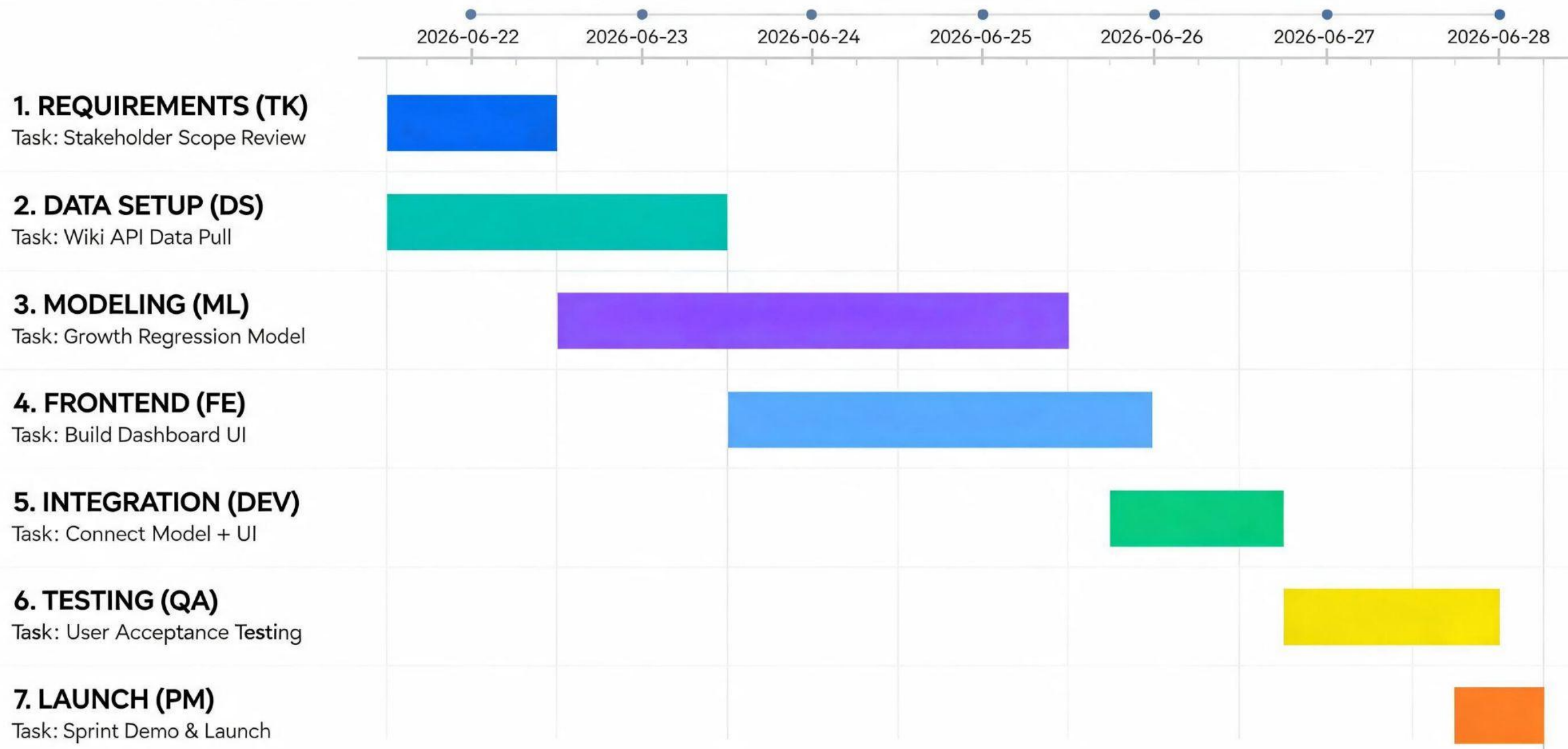
The Project Journey



**Timeline incorporates a 1.5x buffer to account for API rate-limiting and data cleansing overhead.*

Gantt Chart

Wikipedia Growth Predictor - 7-Day Sprint



◆ Data Source

Wikipedia (MediaWiki API, Wikidata)
Historical page revisions & link structures

🌐 Graph Modeling

Wikipedia as a knowledge graph
(Nodes = pages | Edges = links)
Category + reference-based connections

📊 Feature Engineering

Centrality metrics (PageRank, degree, betweenness)
Link & citation growth trends
Category expansion over time

🧠 Analytics & Tools

Python (Jupyter Notebook)
NetworkX – graph analysis
Pandas – data processing
Explainable scoring model (weighted features → probability)

🚀 Forecasting Approach

Historical snapshot comparison (2015 → 2026)
Identify emerging vs. established concepts
Transparent probability-based ranking