



ALGORITHMIC UNI PLACEMENT

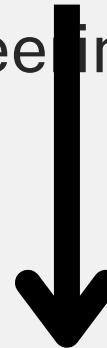
PROJECT PROPOSAL

JOY MACHUKA

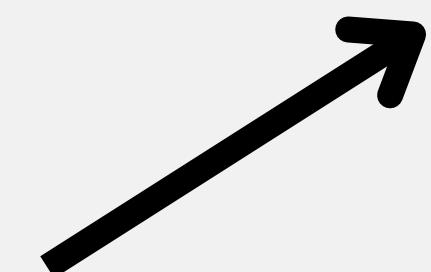


Introduction

Imagine a bright young student named Maria. Throughout her high school years, Maria excelled in mathematics and physics. Everyone around her—teachers, family, and friends—encouraged her to pursue engineering.



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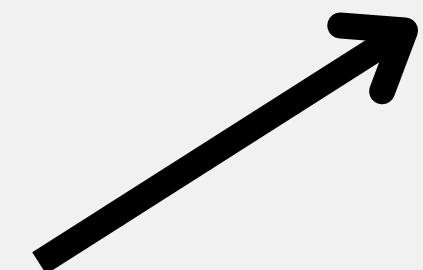


Continuation...

Deep down, Maria loved writing, storytelling, and exploring human behavior.



After two grueling years of engineering, she dropped out, feeling unfulfilled and lost.

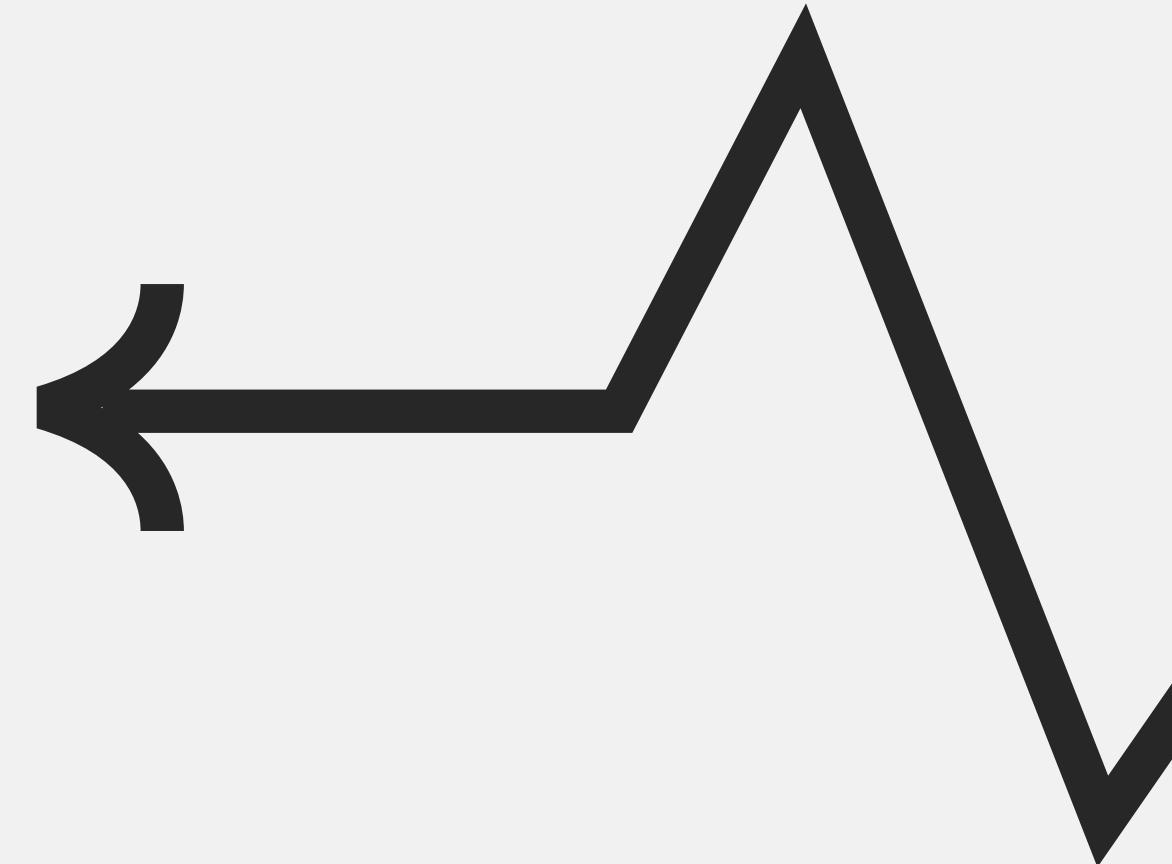


She eventually found her passion in journalism, but it came at the cost of time, money, and a significant emotional toll.

Introduction Summary



Now, imagine if the system had considered more than just her grades. What if it had factored in her interests, personality traits, and creative talents? Could Maria have found her calling sooner, avoiding years of unnecessary struggle? This is the gap I aim to bridge with my project—an algorithm that ensures students like Maria are matched to courses that truly align with who they are and where they can thrive.



Problems



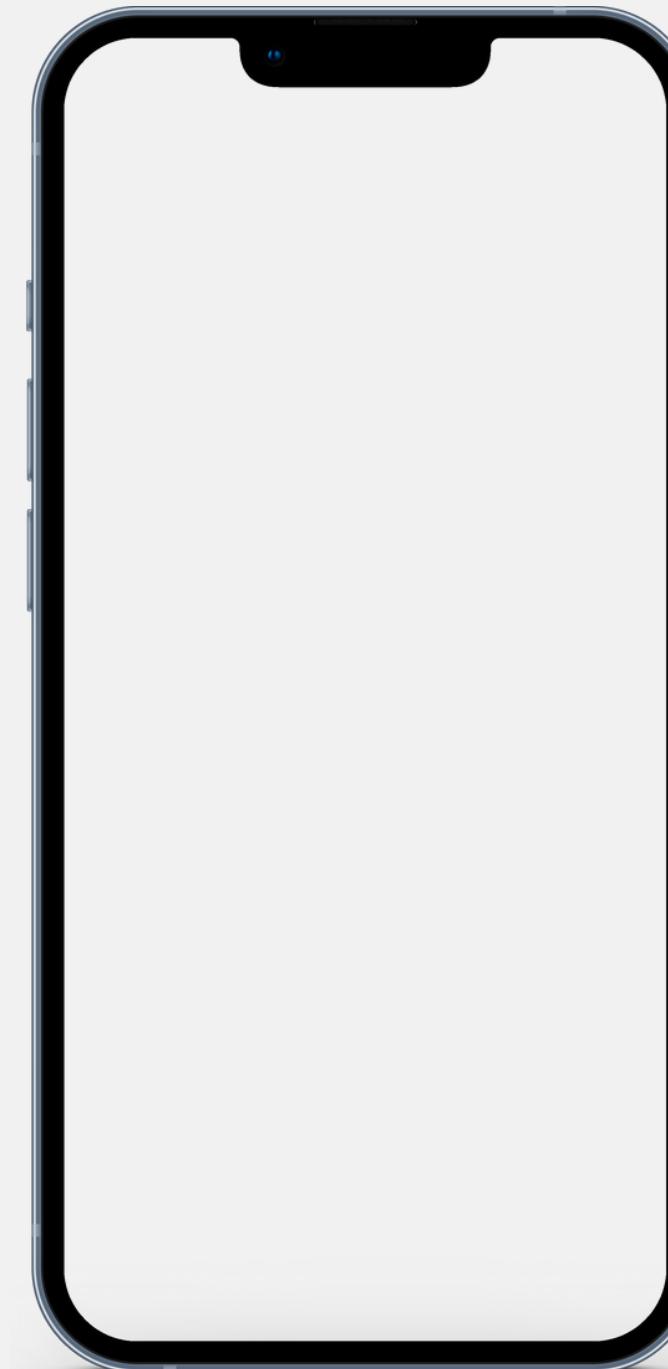
- 01** Mismatch Between Academic Placement and Personal Interests: Leads to Wastage of Time and Resources
- 02** Current Course Selection Systems Lack Holistic Consideration.
- 03** Misaligned Course Placements Negatively Impact Productivity and Well-being

Solution

Customization

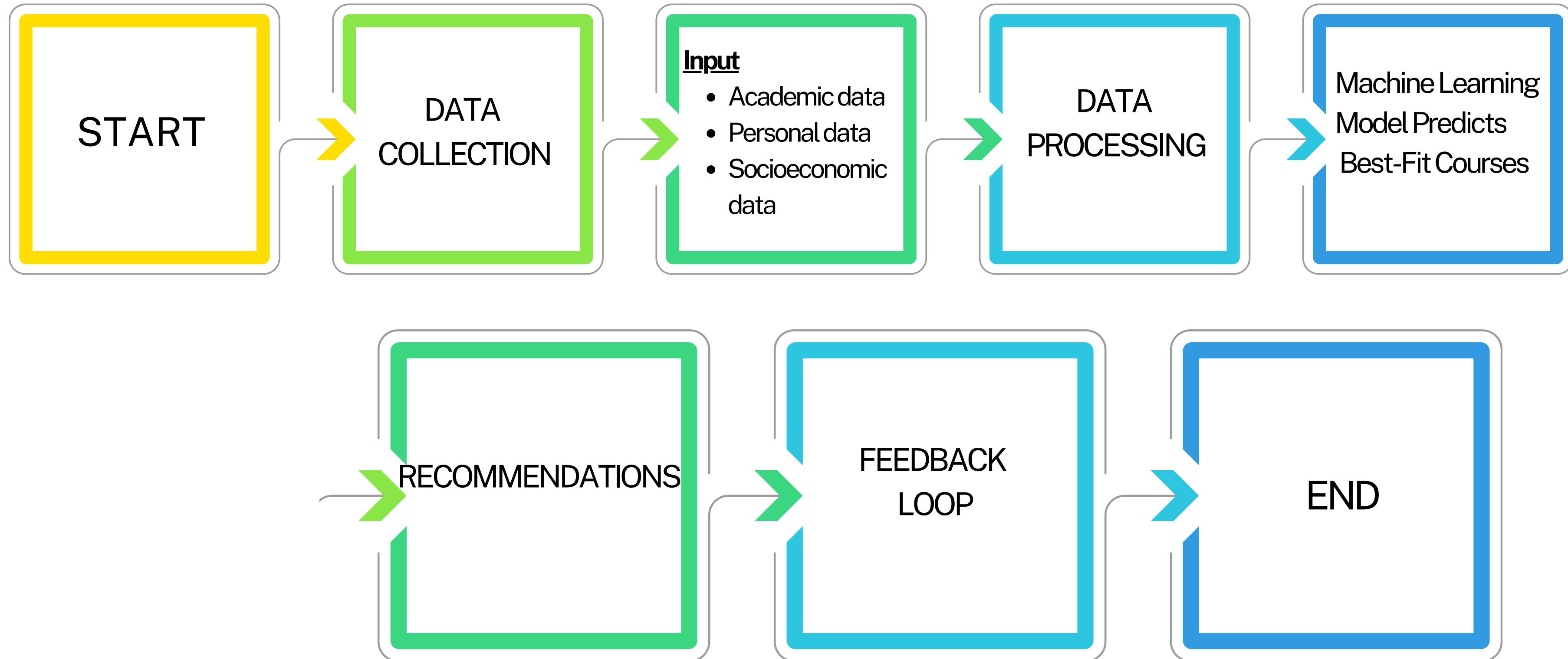
Holistic and personalized approach to university course placements. It integrates three key dimensions:

- **Academic Data:** Includes grades, standardized test scores, and subject preferences.
- **Personal Characteristics:** Considers personality traits, hobbies, and talents based on psychometric assessments and interest surveys.
- **Socioeconomic Background:** Accounts for factors like family income, geographic location, and access to educational resources.



Technological Approach

- A user-friendly interface allows students to input their details
- Machine Learning Model:
- User Interface: A web and mobile platform enables students to interact with the system, view course recommendations, and explore the rationale behind the suggestions for transparency.





GOVERNMENT (MINISTRY OF EDUCATION)

National or regional education authorities responsible for policy-making and implementing equitable, efficient systems for course placement and student success.



EX-HIGHSCHOOLERS (PARENTS/GUARDIANS)



Recent graduates and their parents or guardians seeking personalized, informed guidance on selecting university courses that align with the student's interests, abilities, and career goals.



EDUCATION INSTITUTIONS

High schools, colleges, and universities that can utilize the algorithm to provide better career counseling, optimize student placements, and improve retention and success rates.

Target Market

Competitive Advantages



Improved Student Satisfaction

By aligning courses with individual strengths and aspirations, students are more likely to thrive academically and emotionally.



Efficient Resource Allocation

Reduced dropout rates and fewer cases of students pursuing additional degrees optimize educational resources and funding.



Enhanced Societal Productivity

When students enter fields suited to their skills and passions, they contribute more effectively to the economy and innovation in their chosen professions.

Methodology and Implementation Plan



Mixed-methods approach, integrating both quantitative and qualitative research methods. This ensures a comprehensive understanding of the factors influencing university course placement and maximizes the algorithm's accuracy and relevance.

Research Methods

- **Data Collection:**
- **Analysis:**
- **Algorithm Development:**

Development Phases

Phase 1: Data Gathering and Exploratory Analysis

Phase 2: Algorithm Design and Testing

Phase 3: Pilot Deployment and Refinement

Executive Summary



Problem Recap:

- Current placement systems misalign students with their true interests and potential.
- Consequences: wasted time, resources, and dissatisfaction.

Proposed Solution:

- An algorithm that integrates academic, personal, and socioeconomic data to recommend optimal courses.

Impact:

- Improved student satisfaction, productivity, and societal contribution.



Feedback & Suggestions:

Insights on ethical challenges and stakeholder collaboration.
Ideas for technical implementation or algorithm refinement.

Discussion Question:

"What additional factors should be considered in course placement?"



QUESTIONS??

THANK YOU



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