

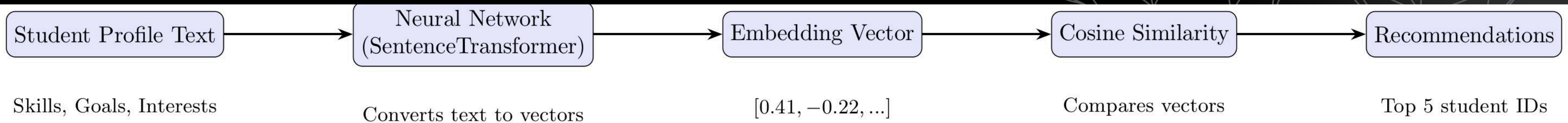
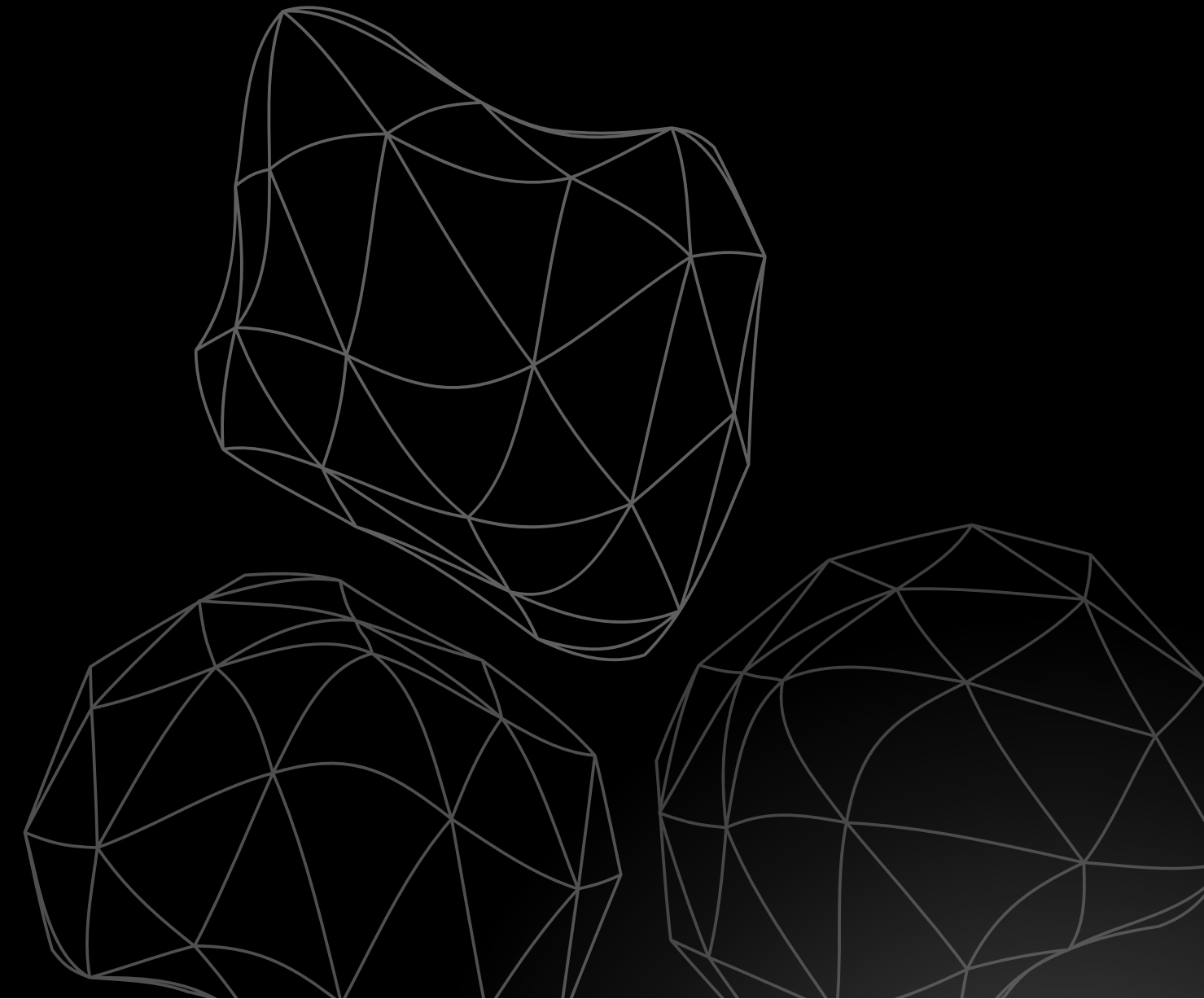


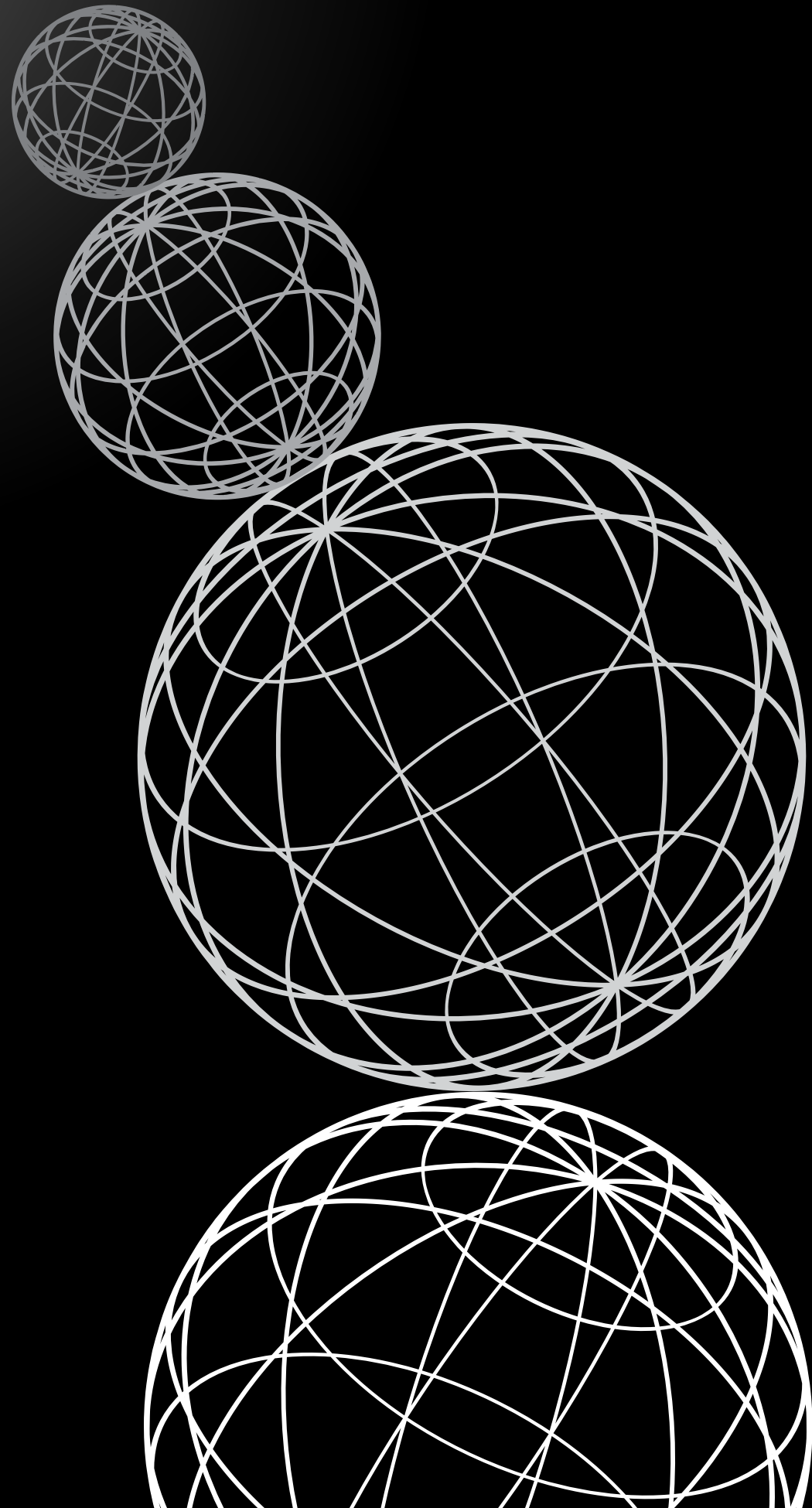
**MACHINE LEARNING**

**-Powered Student Recommendation System**

# WHAT IS THE STUDENT RECOMMENDATION SYSTEM?

- A smart platform to match students based on skills, goals, and interests.
- Uses machine learning (sentence embeddings) for accurate recommendations.
- Built with FastAPI (backend) and React (frontend).



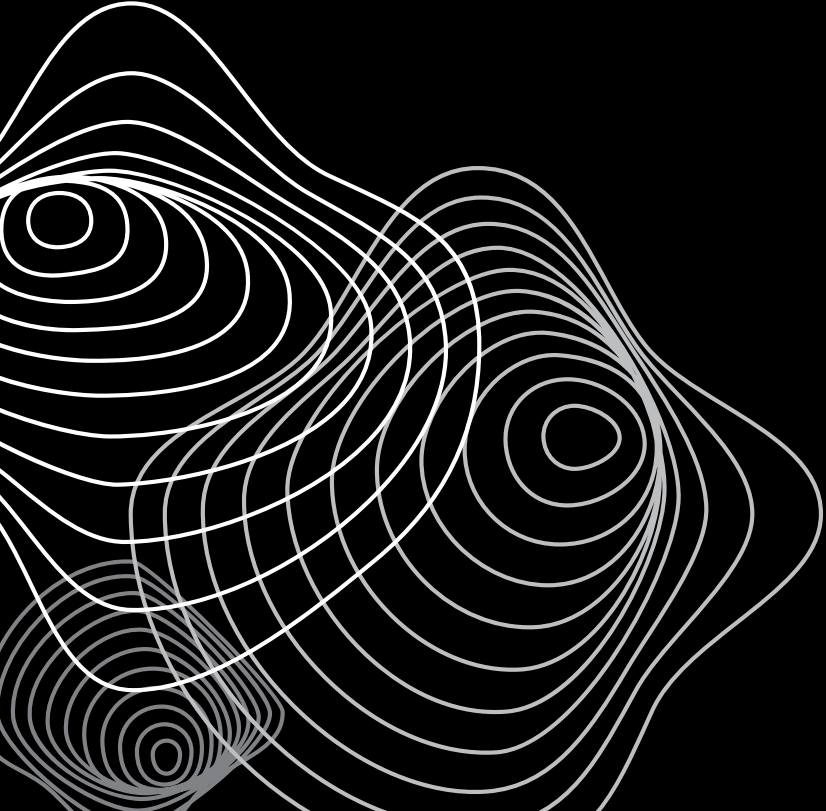


# WHY THIS PROJECT?

- Students struggle to find peers with similar skills or project interests.
- Manual matching is time-consuming and inefficient.
- Need a smart, automated solution to connect students.










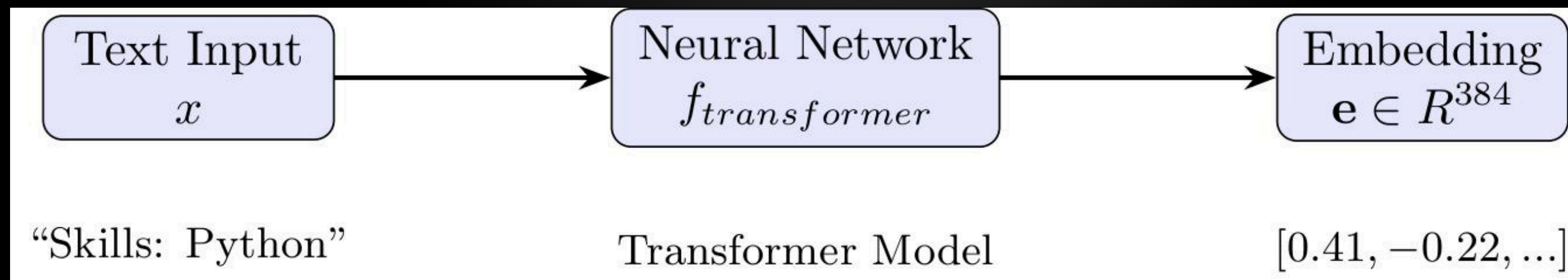
# OUR SOLUTION

- Search-Based Matching: Enter a query (e.g., “Python AI developer”) to find matches.
  - Match Percentage: Shows how closely students align with the query.
  - Rich Profiles: Includes skills, domains, dream companies, and bio.
- 



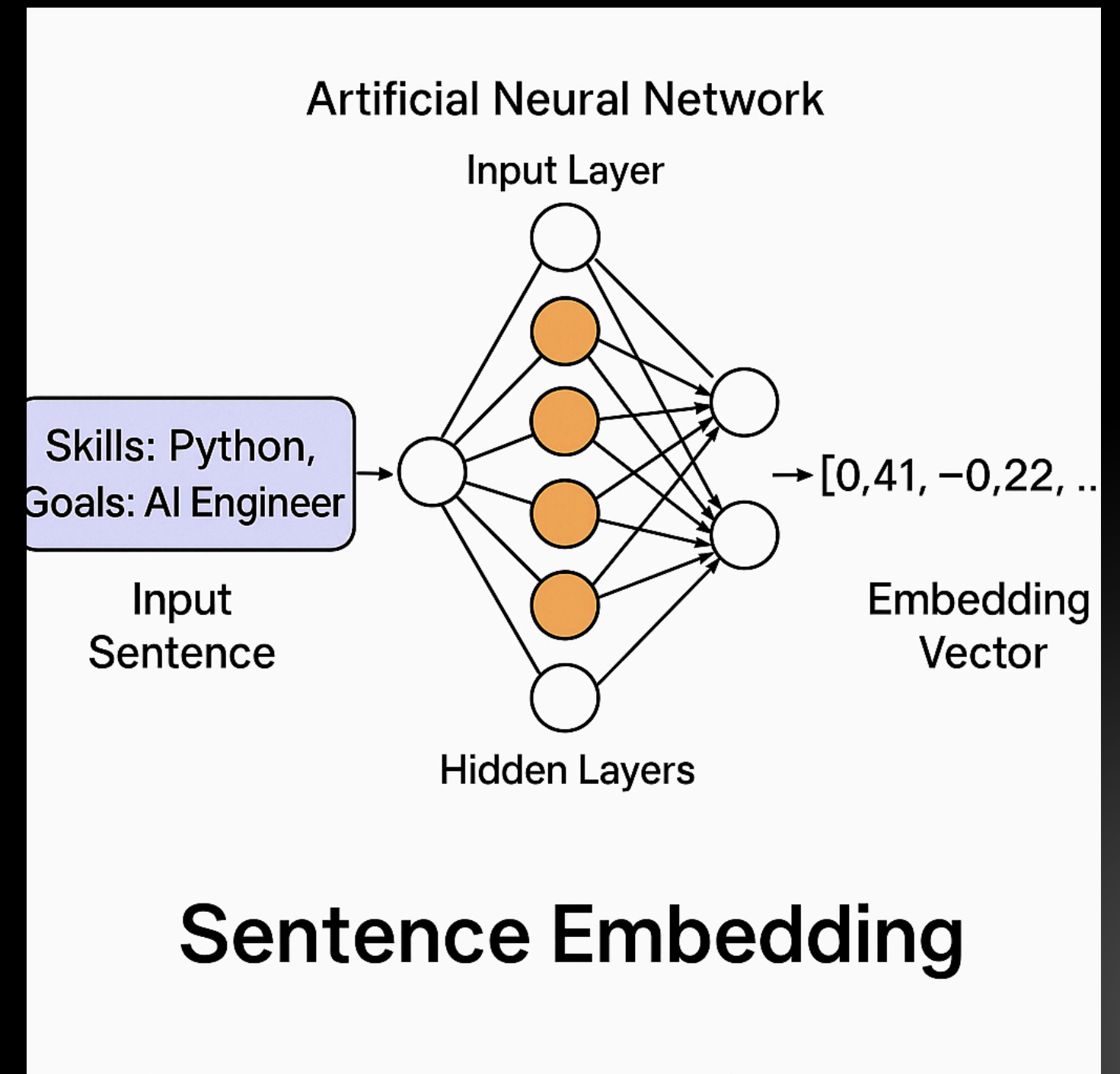
# TECH STACK

- Backend:
  -  Python 3.8+
  -  FastAPI
  -  Sentence-Transformers (all-mpnet-base-v2)
  -  Scikit-learn, Pandas
- Frontend:
  -  React (Vite.js)
  -  Axios
  -  Custom CSS



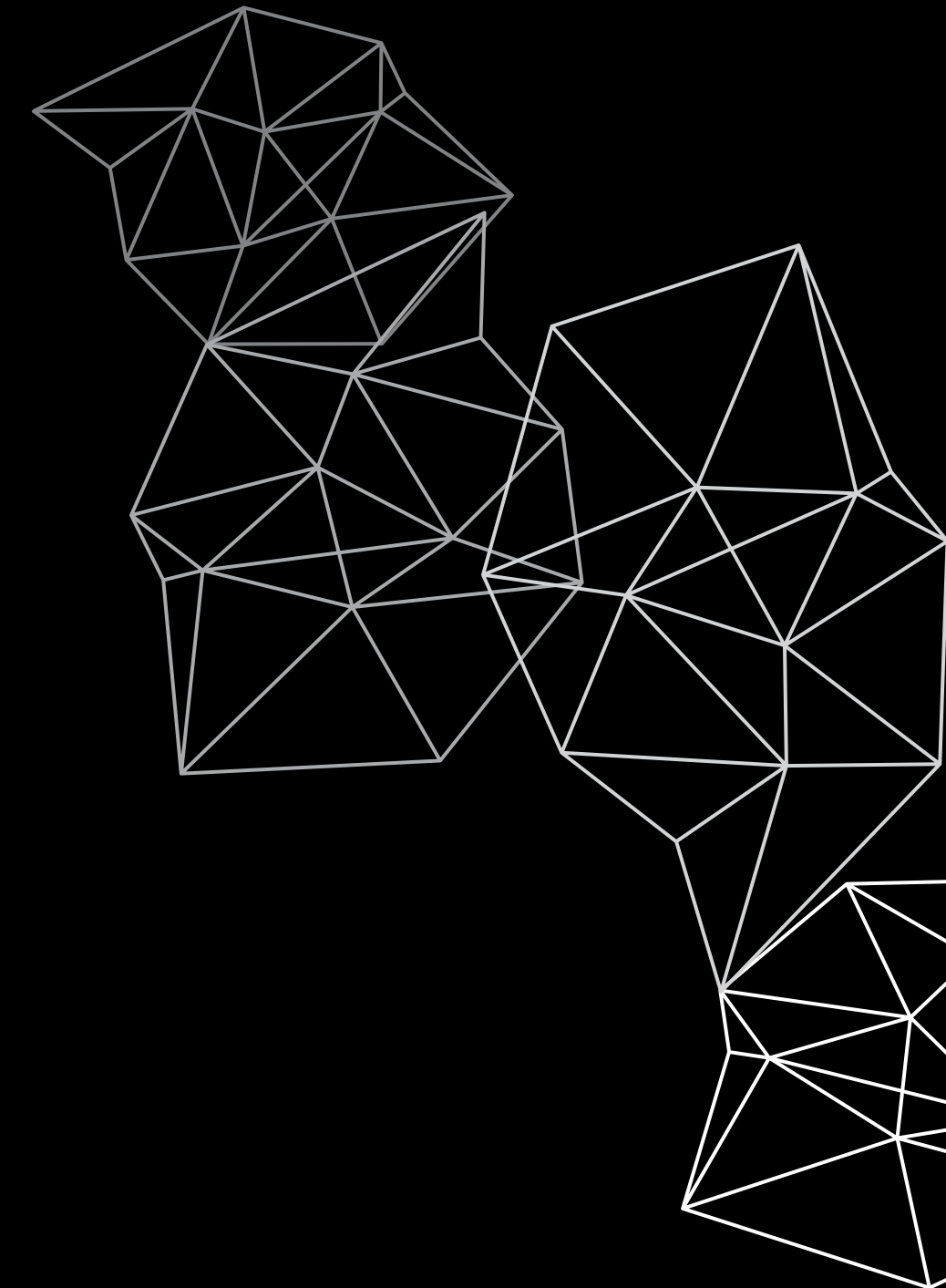
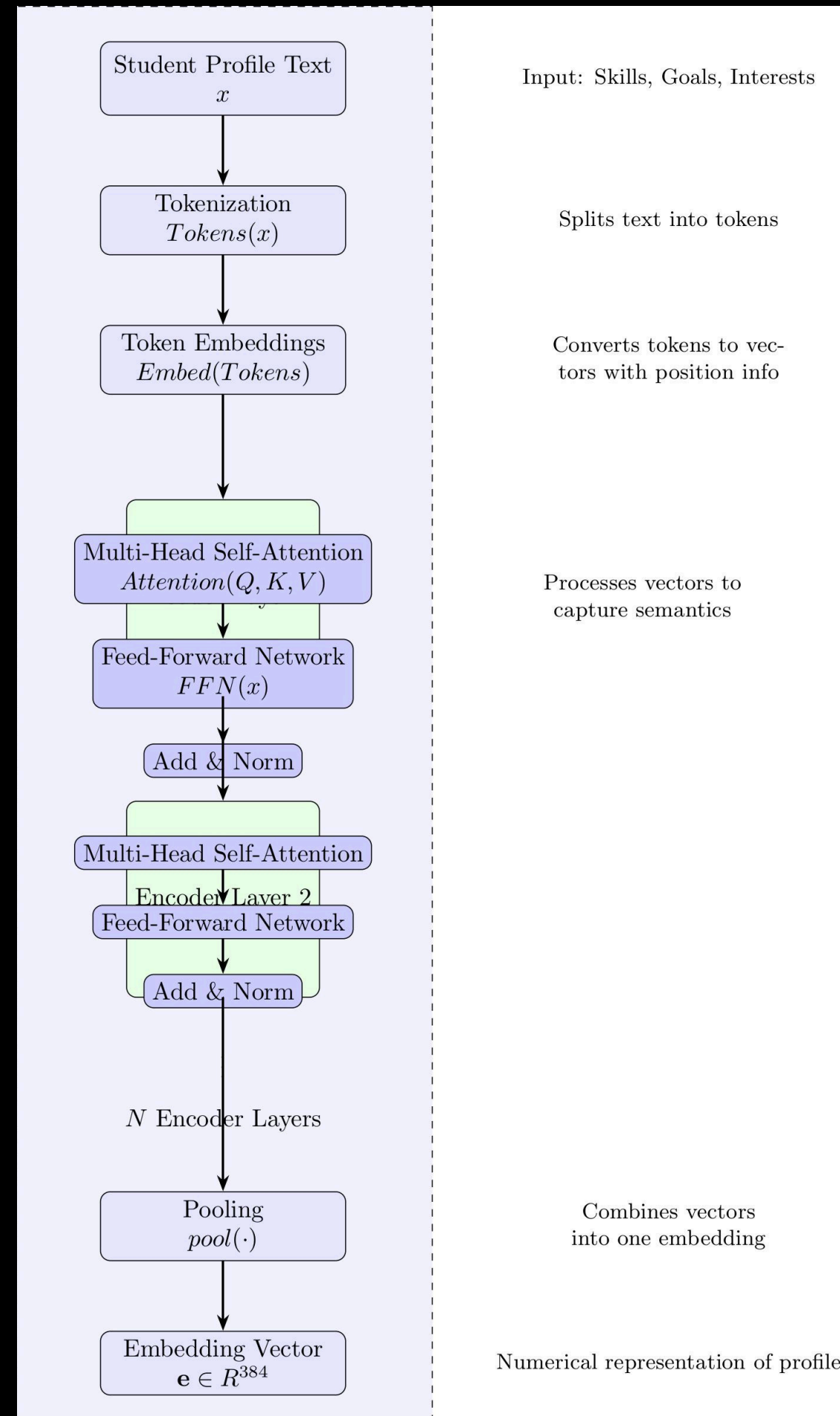
# HOW IT WORKS

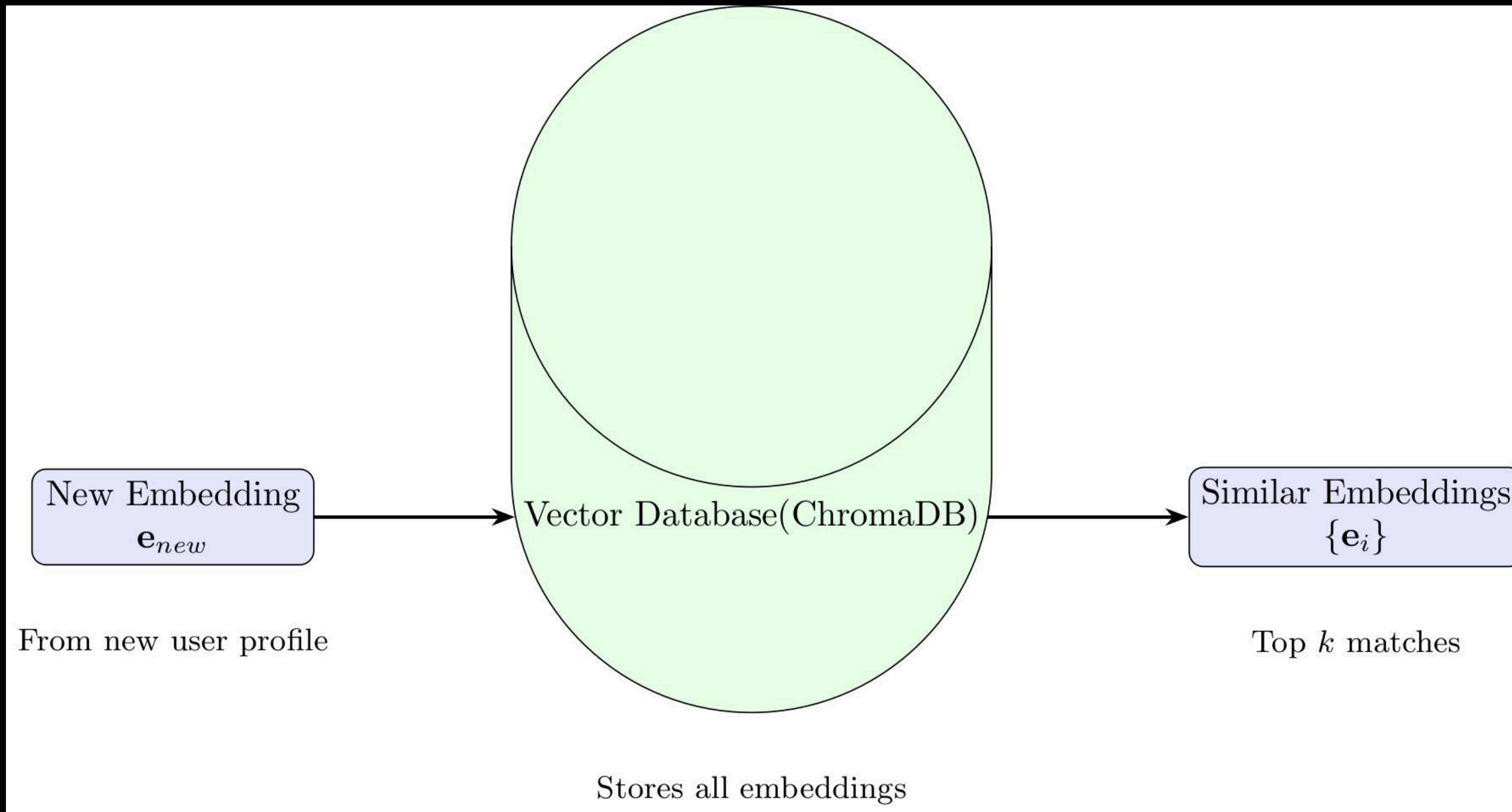
- Load student profiles from user\_data.csv.
- Generate embeddings using all-mpnet-base-v2.
- Compute cosine similarity between query and profiles.
- Display top matches with match percentages in the UI.



# KEY FEATURES

- Smart search with natural language queries.
- Match percentage for each recommendation.
- Detailed profiles (skills, domains, bio, etc.).
- Responsive, futuristic UI.
- Fast and scalable backend.







# User Search System 🚀

a person with web development

Search

Pedro

Matched: 88.16%

Skills: ['SQL', 'Git', 'Spring Boot']

Domains: ['Mobile Apps', 'Cybersecurity']

Dream Companies: ['Google', 'NVIDIA']

Bio: I love Web Dev and CSS

Personality: ESFJ

Ashley

Matched: 88.1%

Skills: ['Go', 'HTML', 'Flask']

Domains: ['AI/ML', 'Blockchain']

Dream Companies: ['SpaceX', 'OpenAI', 'Amazon']

Bio: I love Web Dev and Git

Personality: ESFP

Tiffany

Matched: 87.94%

Skills: ['Flask', 'Spring Boot', 'Jenkins']

Domains: ['Game Dev', 'AI/ML']

Dream Companies: ['NVIDIA', 'Adobe', 'IBM']

Bio: I love Web Dev and Nginx

Personality: ESTP

Donald

Matched: 87.86%

Skills: ['TypeScript', 'Django']

Domains: ['AR/VR', 'Blockchain']

Dream Companies: ['Meta', 'Adobe', 'NVIDIA']

Bio: I love Web Dev and CSS

Personality: INFJ

Kyle

Matched: 87.85%

Skills: ['Docker', 'C++', 'Linux']

Domains: ['IoT', 'Data Science']

Dream Companies: ['Google', 'Amazon', 'Tesla']

Bio: I love Web Dev and Linux

Personality: ENFP



# THANK YOU

BY: THRINATH  
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