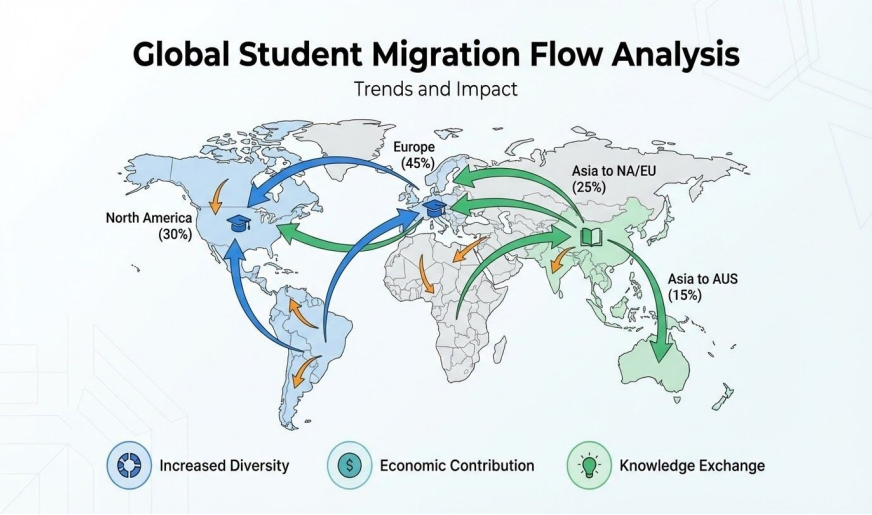

https://www.kaggle.com/datasets/rehanliaqat17/global-student-migration?resource=download

Global Student Migration Flow Analysis

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About Data

Dataset Name: Global Student Migration & Career Outcomes

Source: Kaggle

Kaggle Link

https://www.kaggle.com/datasets/rshanliaqat17/global-student-migration?resource=download

Description:
This dataset analyzes the flow of international students across various countries and universities, linking education to career and economic factors.

- **Demographics:** Origin and destination countries.
- **Academics:** University names, fields of study (e.g., Engineering, Arts), and GPA.
- **Career Outcomes:** Post-graduation placement, job roles, and **Starting Salary** (USD).
- **Migration Factors:** Reasons for enrollment (e.g., "Job Opportunities", "Higher Ranking") and visa status.

Why this dataset?
I chose this dataset to investigate the relationship between educational choices (destination and field of study) and economic success, providing insights into the "Return on Investment" for international students.

- **UNESCO/OECD:** Global migration flow statistics. License: CC BY 3.0 IGO.
- **NACE 2023:** Starting salary and ROI data. License: Educational/Public Attribution.

Methodology

Tools & Technologies:

- **Python (Pandas, Matplotlib, Seaborn):** Used for data cleaning and visualization.
- **Generative AI:** Used to assist in scripting the code and refining the text.

Data Processing:

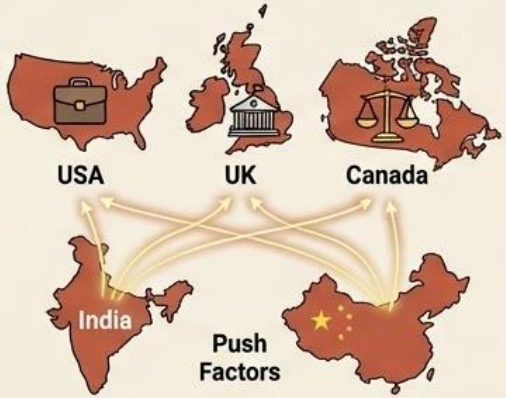
- Data was aggregated by destination_country and field_of_study.
- Median values were calculated for salaries to avoid skewing from outliers.

Verification:

- AI-generated code was tested and verified against the raw dataset to ensure the charts accurately represent the underlying data. (Gemini)

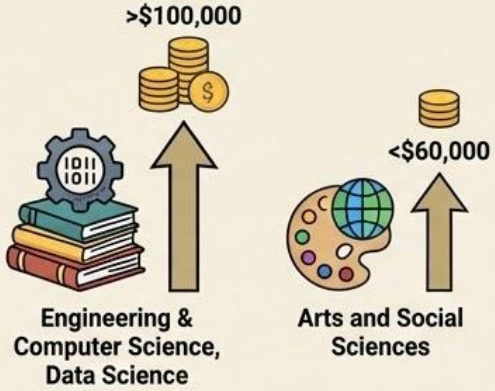
Insights from the Data

1. Migration Flows: The 'Big Three' Dominance



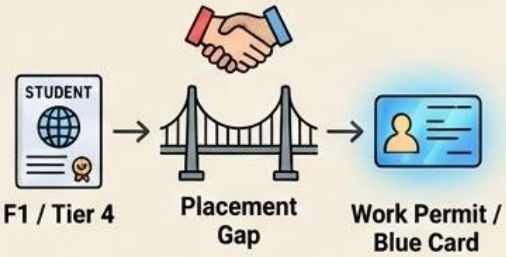
- **Top Destinations:** USA, United Kingdom, and Canada are the most frequent.
- **The 'Why':** Students choose specific outcomes (Jobs, Ranking, Stability).
- **Emerging Trend:** Flow from India and China, driven by lack of capacity.

2. The ROI of Education: Field of Study Matters More



- **The 'Gold' Tiers:** Engineering & Data Science consistently command highest starting salaries.
- **The 'Passion' Tier:** Arts & Social Sciences show significantly lower starting salaries.
- **Key Insight:** Clear 'Return on Investment' hierarchy for STEM degrees.

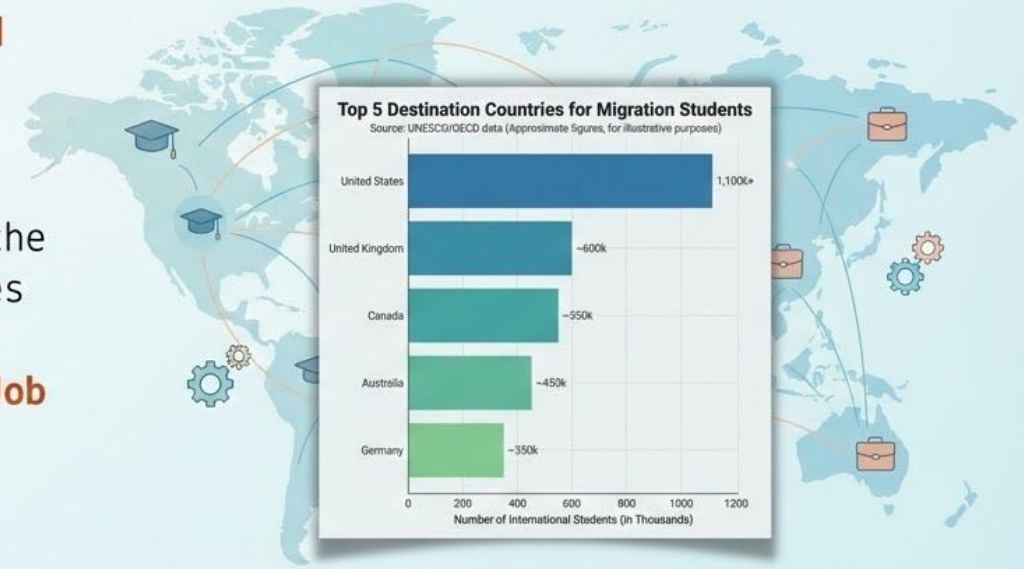
3. Visa Status & Career Outcomes



- **Visa Types:** Mix of student visas and various Work Permits.
- **The 'Placement' Gap:** Immediate placement is not guaranteed; varies by Visa Status (e.g., OPT).
- **Story Angle:** Securing a job (Placement) is critical to convert a student visa into a long-term residency permit.

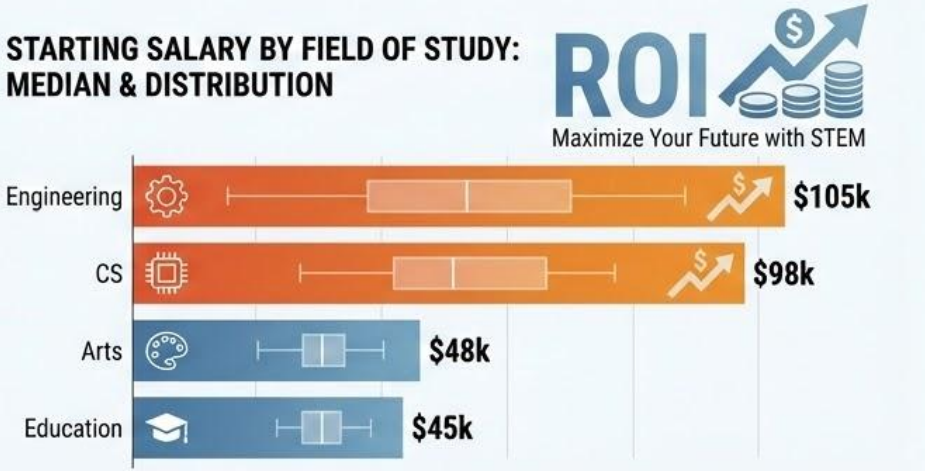
Preferred Destinations: Where Do Talents Go?

Data analysis reveals that the **United States, United Kingdom, and Canada** remain the most coveted destinations for international students. By cross-referencing destinations with the '*Enrollment Reason*' column, it emerges that this choice is not random but driven by two predominant factors: **'Job Opportunities'** and **'Higher Ranking'**. Students are willing to move to different continents to access prestigious universities that guarantee rapid entry into the global labor market, overcoming barriers such as geographical distance or visa costs.



Return on Investment: Salaries by Sector

There is a significant disparity in starting salaries across different fields of study. As highlighted by the chart, graduates in **Computer Science and Engineering** record median salaries significantly higher (often exceeding **$100,000 annually**) compared to sectors like Arts or Social Sciences. This data suggests that the choice of ***Field of Study* is the strongest predictor** of immediate post-graduation economic success, often more influential than the destination country. For students, **STEM disciplines** represent the path with the **highest and most secure ROI** (Return on Investment).



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