CS 171 Final Project Proposal:

Title: Migration as an Instrument of International Development

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* **Background and Motivation:** As two students of the MPAID program we are very interested in the role Migration plays in International Development. One of our Program Directors is interested in visualizing the overall wage increment of migrants from Non-OECD countries to OECD countries. We hope to visually depict not only the Bilateral flows of Migration and Remittance but the overall changes in Wages by education level and gender when they move from developing countries to non developing countries. Also, showing these in comparison to more standard metrics like Aid and Trade will be beneficial.
* **Project Objectives.** What is the overall increment on wages of migrants of certain skill levels when they move from a developing country to a developed country? How does that increment compare to overall trade flows, remittances, and aid flows.
* **Data.** Our data will be collected in three forms
  + **(Wage/Population/Aid data):** World Development Indicators (<http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators>)
  + **(Migration data by education/gender):** IAB brain drain data (<http://www.iab.de/en/daten/iab-brain-drain-data.aspx#Sources>)
  + **(Remittance data):** World Bank (http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:22759429~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html)
* **Data Processing.** We expect to construct some indicators through the aggregation of multiple data sets. We expect this to be somewhat time consuming but doable.
* **Visualization.** Our basic design incorporates two overall products (more if time permits). The idea is to start from a global perspective (product 1) and refine to smaller levels of data by selecting on various types of countries (product 2)
  + The first would be utilizing a map of the world and creating a heat map of migration related indicators. Some of the indicators that are available or could be constructed from the data included are migration flows to and from OECD countries, average wages gained by migrants by moving to a OECD country, remittances, aid flows, and trade flows. The preliminary idea is to use Radio Buttons to switch across different visualizations utilizing the concepts learnt in HW2.
  + The second product utilizes concepts seen in HW3. Along with the world map, we will have various migration related layouts, which can interact with one another through use of sliders, brushes, and point-clickers. The designated task would be quantitative in nature. By selecting either an OECD country or a Non OECD country, various graphs would change to map the top 5 selected “partner” countries along with various characteristics to include overall remittance, migrant stocks, aid, trade, and wage differential.
  + In essence, the idea is to create something similar to one of the previous projects (https://ba66f0012633a2840e66efc393df816fc324c2f4.googledrive.com/host/0B6YljmV-VTJZcElIUWlVZGIzTmM/index.html) but with focus on migration rather than aid:
* **Must-Have Features.** Product 1 (Heat Map), Product 2 (interconnected display of country data)
* **Optional Features.** Extending further, it would be cool to visualize “flows” of migrants or remittance through visual mappings and connected lines. Example: (http://www.citylab.com/tech/2013/12/facebook-using-your-profile-track-global-urban-migration-trends/7982/)
* **Project Schedule.** Our overall timeline is as follows:
  + **Week 0:**
    - Setup Github
    - Develop Workflow
    - Submit Proposal
    - Develop Project components
  + **Week 1 (6th-10th):**
    - Create small workable dataset
    - Create Index File
    - Build out Map
    - Identify Graphs to be utilized
  + **Week 2 (13th – 17th):**
    - Complete Data Set
    - Complete Heat MAP
    - Divide up objects (graphs) to be constructed
  + **Week 3 (20th – 24th):**
    - Data crunch required ratios and numbers
    - Complete Object Graphs and interconnect
    - Develop pictures of regional or group flow patterns?
  + **Week 4 (27th- 31st):** 
    - Work on Aesthetics of the website (colors, displays, etc…)
    - Loud on Github, test
  + **Week 5 (4th – 7th):** 
    - Create Video