Hejira – Migration In Afghanistan
Visualizing and quantifying inter-provincial demographic movement

Problem
• In underdeveloped countries, philanthropists campaign to promote the well-being of humanity by addressing problems of poverty, healthcare and education.
• Absence of any concrete knowledge about demography or their reaction to events like calamities and bomb blasts makes this endeavor even difficult.

Approach
• Leveraging mobile subscribers’ activity log, also known as Call Detail Records, as a substitute to census or actual demographic migration information.
• Developing interactive visualizations to get an insight into inter-provincial migration and associating them with Migrated users’ Short-term movement.

Top 5 Migrated Provinces
Call Detail Records are used to quantify migration to and from Kabul – the most populous province in Afghanistan

Migration Map
Google Maps API and D3.js are used to visualize the inter-provincial migration movement. The map is made interactive by giving user an option to view specific migration numbers between any two provinces.

Granular User Movement Map
Daily movement pattern of migrated users between two provinces with users grouped by their neighborhood towers.

How It Works?
Choose a source province to view human migration to all other provinces
Choose a destination province to view granular movement between two provinces
Understand the migration numbers from/to other provinces.

Mentor: Joshua Blumenstock
joshblum@uw.edu

Delong Gao Ramkumar Chokkalingam Sashwat Kondepudi
gaodl@uw.edu ramar@uw.edu sk08@uw.edu

Data Science and Analytics Lab
http://datalab.ischool.uw.edu - datalab@uw.edu

Nangarhar to Kabul
Balkh to Kabul