

Job Seeker

L03 G03





Motivation

Background: Job search is a timeless demand for human society. The prospect of the market is bright since job search tool becomes more and more significant in modern life.

The advantages of the job search tool market:

- more popular than traditional methods
- huge demand
- sustaining potential



Problem

Users expect more information than current tools commonly provide. For example:

potential of the job and the field
the demands for such job in different locations.

Prior Work

Job bank

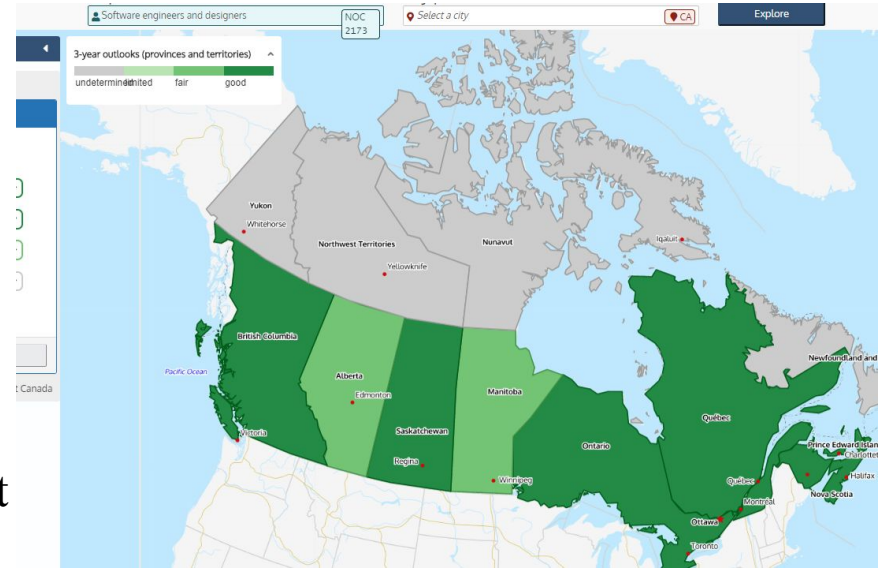
- Shows spatial distribution
- No visualization of data over recent

Indeed.com



Find jobs

- Focuses more on posting and hiring of particular job openings with detailed information
- Less attention paid to job titles in general



Input & Output

- Detailed Job Information
- Employment Tendency
- Employment Map

Manufacturing Employment in Canada



Manufacturing as a % of Total Employment by Province

Manufacturing Employment in Canada By Province

Quebec 28.5%
Ontario 44.6%
British Columbia 10.1%
Alberta 6.9%
Manitoba 3.7%
New Brunswick 1.8%
Saskatchewan 1.6%
Newfoundland & Labrador 0.5%
Prince Edward Island 0.4%



Algorithm

- Substring Search

- Divide jobs in the data set into several categories
- Brute force, KMP, Rabin-Karp...

- Find the distance between two points

- Google Map API

Managers in Health Care
Administrators - Post-Secondary Education and Vocational Training
School Principals and Administrators of Elementary and Secondary Education
Managers in Social, Community and Correctional Services
Government Managers - Health and Social Policy Development and Program Administration
Government Managers - Economic Analysis, Policy Development and Program Administration
Government Managers - Education Policy Development and Program Administration
Other Managers in Public Administration
Library, Archive, Museum and Art Gallery Managers
Managers - Publishing, Motion Pictures, Broadcasting and Performing Arts



Algorithm

- Sorting algorithm
 - Sort jobs with respect to distance from the user
 - Merge sort? Quick sort?

merge		✓	$\frac{1}{2} n \lg n$	$n \lg n$	$n \lg n$	$n \log n$ guarantee; stable
timsort		✓	n	$n \lg n$	$n \lg n$	improves mergesort when preexisting order
quick	✓		$n \lg n$	$2 n \ln n$	$\frac{1}{2} n^2$	$n \log n$ probabilistic guarantee; fastest in practice



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