An Analysis and Evaluation of the Design Space for Online Job Hunting and Recruitment Software

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SSHRC CRSH

Social Sciences and Humanities Research Council of Canada   Conseil de recherches en sciences humaines du Canada   Canada

Motivation

- Job seekers face difficulties in finding suitable work
  - Lack of skills, confidence, domain knowledge

- Job providers face difficulties in finding suitable employees
  - Unable to compare range of technical qualifications
  - Mismatch of company fit

- Online job boards do not support user needs
  - No ability for job providers and job seekers to interact
  - Job seekers cannot learn from each other
  - Job providers cannot personalize their job postings

Want a better way to connect job seekers with job providers

Our Research Goals
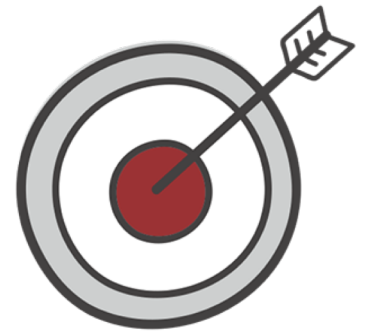
- To better understand how youth job seekers search for jobs

- To better understand how small businesses look for the right candidates

Design Research

- Participatory design with job seekers
  - Brainstorming
  - Card sorting
  - Paper prototyping

- Participatory design with job providers
  - Brainstorming
  - Card sorting
  - Interface evaluation

Summary of Features: Job Seekers

User Profile	Job Search	Social Media and Networking
- Personal information - Résumé upload - Cover letter upload - Résumé layout tool - Messages inbox - Calendar - Notifications - Job assessment (survey) - References	- Search by profession, keyword, skill, location, experience required, education required - Specific business - Current employees - Specific people - Immediate needs - Ranking saved items - Prioritizing search results	- Stay updated - See what others are doing - See who is working there - Keep you connected to the community - Like button - Instant message with others - Integration with other apps - Video chat - Emotes

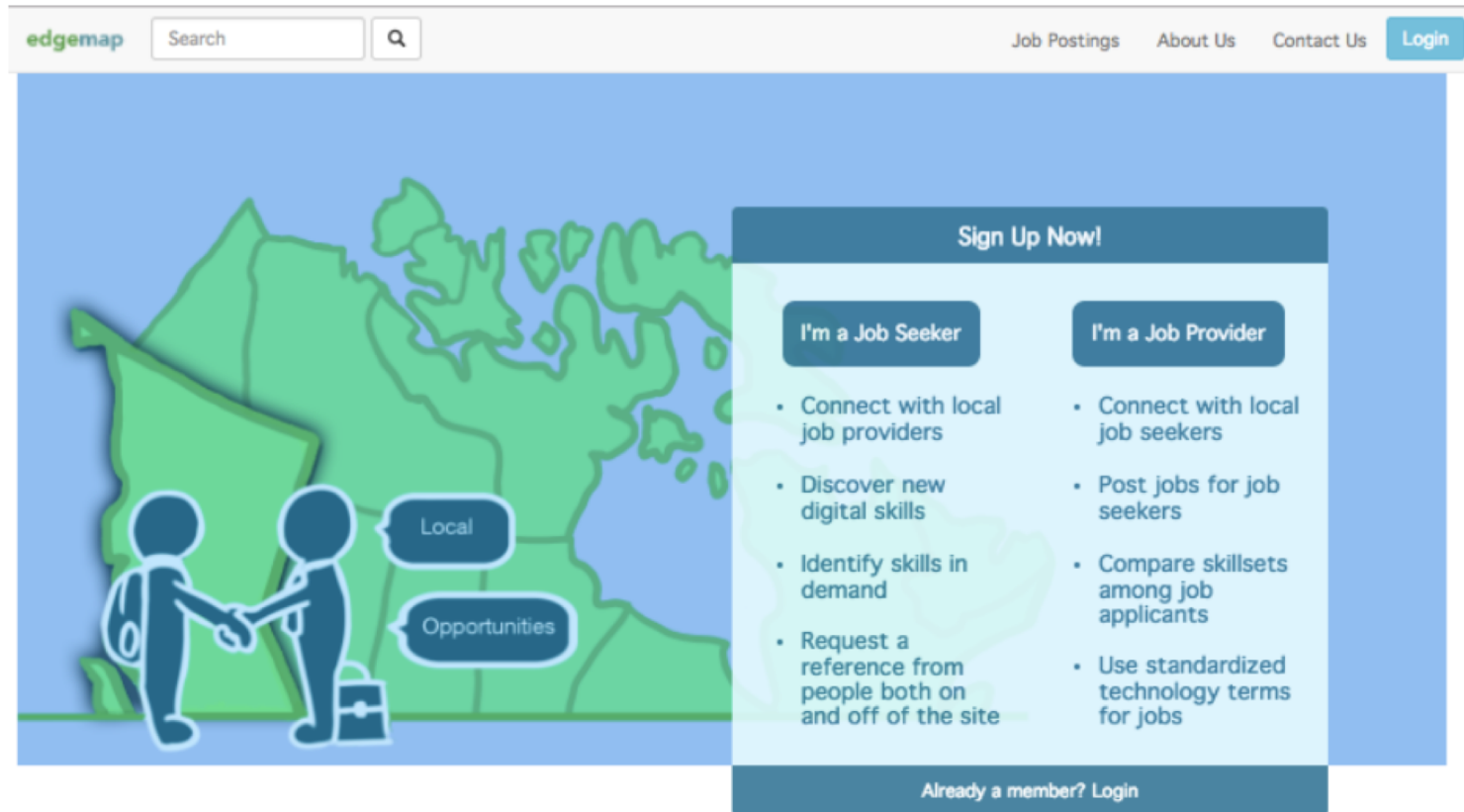| Resources	Job Consideration	
- Ongoing training - Accommodations search - Sample résumés - Sample cover letters - Tips for landing a job - Current affairs - Tips of the day - Volunteer opportunities - Career paths	- Job application (individual) - Mass job application - Featured jobs - Identify top 5 skills to fit needs - Way to contact manager or previous employees in your network - View comments about job from previous employees - View comments about business from previous employees	

Implications on Design Space

- Not just a job board
- Online social networking is second nature (~2014)
- Interaction, feedback, early indication
- Resources, training, supporting functions
- Categories of features were the same between job seekers and job providers

Holistic view of job search and recruitment process

EdgeMap: A Minimal Viable Prototype

http://edgemap.ok.ubc.ca/

EdgeMap Features

- Job Seeker Features
  - User profile
  - Online portfolio
  - Request testimonials
  - Complete skills survey
  - Browse community
  - Review job/company ratings
  - Search for jobs
  - Apply for jobs

- Job Provider Features
  - Company profile
  - Add job posting
  - Identify skills for ideal candidate
  - Manage job postings
  - Compare applicant skills
  - Contact other users
  - Make hiring decision

Job Seeker's Skills Profile
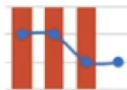
Skills Questionnaire: Word Processing

Category: Word Processing

Go back to My Profile

Legend: — Average Job Seeker   ■ Me

Chart (Y-axis: Most, Half, Few, None; X-axis: Basic, Intermediate, Advanced, Expert) — Average Job Seeker line at "Half" level across Basic, Intermediate, Advanced, Expert.

	I don't know how to do any of these	For a few of these, I can do them well	For about half of these, I can do them well	For most or all of these, I can do them well
Basic • Open a new document • Edit a document • Save a document • Cut/copy/paste content • Close a document • Switch to another opened document • Zoom in and out	○	○	○	●
Intermediate • Create section headings • Create title pages and table of contents • Adjust text stylizations and spacing • Create bullet lists • Create tables • Insert images	○	○	○	●
Advanced • Use a template • Modify paragraph spacing • Set document margins • Change page orientation • Add header and footer content • Add captions to images and tables	○	○	●	○
Expert • Spell check the document • Grammar check the document • Check word count of highlighted text • Add comments to a document • Use "review mode" to highlight contributions made by different users	○	●	○	○

Submit

Comparing Alternative Career Paths
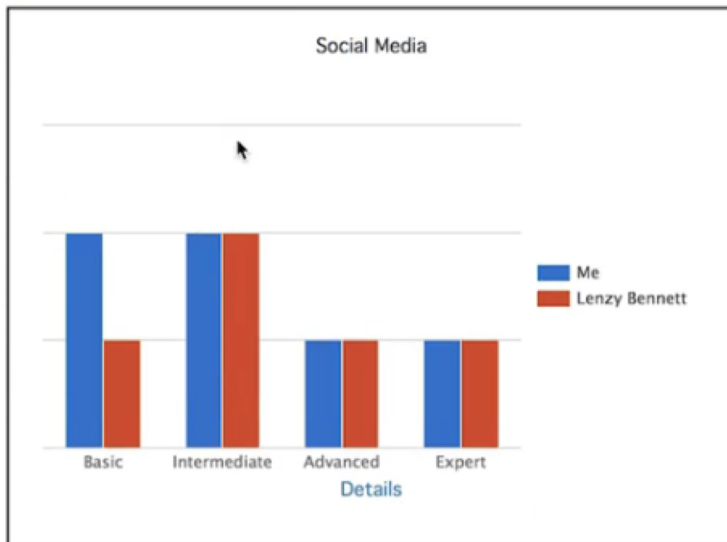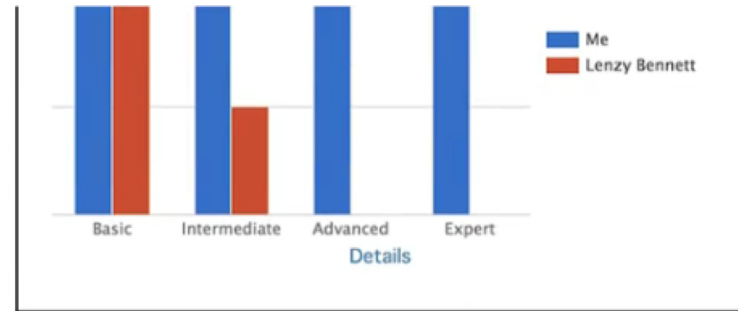
Pre-Assessment/Increase Confidence in Job Application

PET SMART

PetSmart Inc.

1000 Harvey Ave.
Kelowna BC V1V 1V1

hugh@mcguire.com

Linkedin   Twitter   Facebook

We are looking for someone to host our Social Media accounts.

| IDEAL CANDIDATE | SOCIAL MEDIA MANAGER | ABOUT US | JOBS |

Category: Social Media

There are 4 skill levels: Basic, Intermediate, Advanced, and Expert. Each level has a list of skills associated with it. Users rate themselves based on how well they know each group of skills: None of the skills, a few of the skills, half of the skills, or most/all of the skills.

Basic
- Read posts
- Follow others
- Subscribe to groups and forums
- Like/favourite content

Intermediate
- Check news updates
- Create social media accounts
- Update account
- Participate in online question

Advanced
- Solicit user feedback
- Develop text content for social media
- Develop images/video content

Expert
- Moderate forums and disussions
- Incorporate social media as part of a larger campaign
- Develop social media plan

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Job Provider's View of Applicants

Skills in Context

Category: Programming

|	I dont know how to do any of these	For a few of these I can do them well	For about half of these, I can do them well	For most or all of these, I can do them well
Basic • Use tools and templates to create websites • Modify basic HTML code or code in other markup languages • Modify simple CSS elements • Understand basic concepts in computer programming	○	○	○	◉
Intermediate • Build simple websites from scratch • Write and test programs to do mathematical calculations • Write and test programs that read from and write to files • Write and test programs that use elementary data structures such as arrays and linked lists	○	○	○	◉
Advanced • Write and test programs that use complex data structures such as hash maps and trees • Write and test programs that have a graphical user interface • Write and test simple apps for mobile devices • Measure programs for performance	○	○	○	◉

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Compare Multiple Applicants
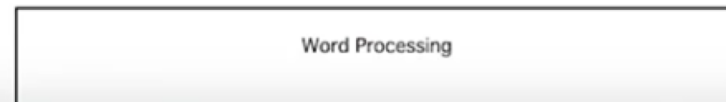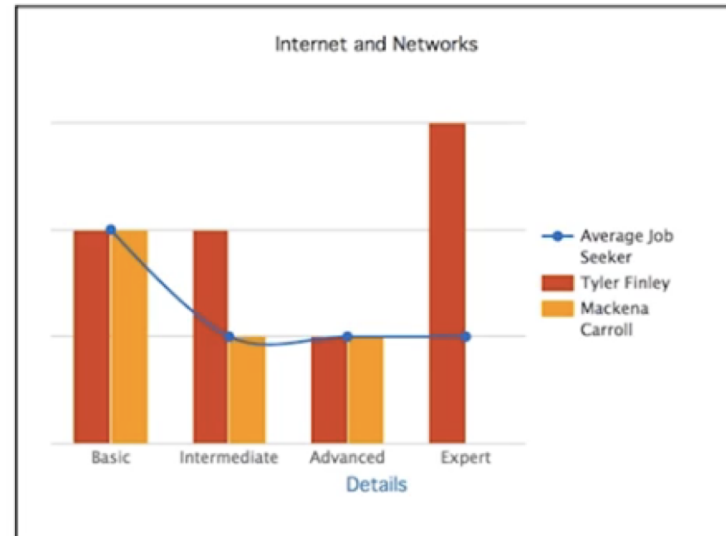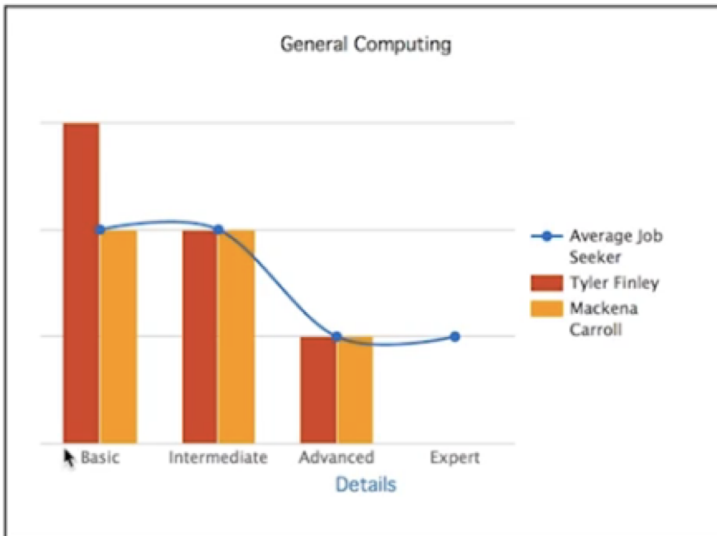
Usability Study

- Youth participants as job seekers
  - 45 university students (21 F, 24 M; 75% were 18-20 years old)
  - Tasks: create account, complete user profile, add 5 projects, upload résumé, browse for jobs, determine if they are qualified for jobs, browse others and compare against their skills
  - Complete post-questionnaire

- Business participants as job providers
  - 7 business owners/managers (2 F, 5 M; mostly with employees under 35 years old)
  - Tasks: technology attitude survey, create account, post 2 job ads, evaluate 5 applicants for 2 fictitious jobs
  - Complete post-questionnaire

Results

- Youth participants:
  – Easy to use (77.8%)
  – Would use for self-promotion (53%)
  – Would use for job hunting (51%)
  – Better than paper résumé (42%)

- Business participants:
  – Easy to use (4/7)
  – Would use for recruitment (4/7)
  – Informative and helpful (5/7)
  – Better visuals (6/7)
  – Reviewed résumés and skills graphs (100%)
  – Worthwhile to create ideal candidate (100%)

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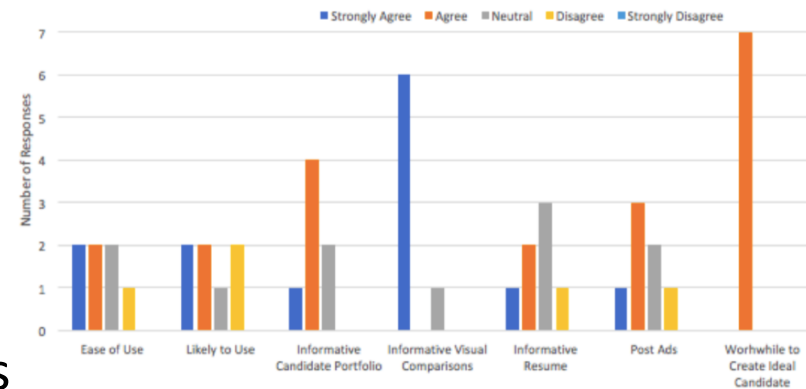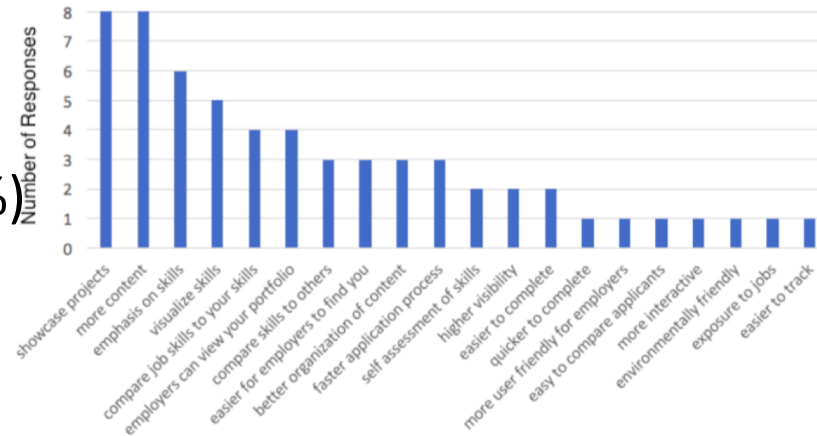
Future Work

WHAT'S NEXT?

- Main finding: software needs to support the whole job hunting and recruitment process
  - Online social networking is expected
  - Skill comparisons can improve job seeker confidence, help with career planning, support hiring decision making

- Caveat: Available user base
  - Would only adopt if there are a lot of job seeker users
  - Would only use if there are a lot of job postings

- Future feature: Customizable skills survey
  - Include additional skills surveys
  - Allow individual users to customize relevance