Tech J.SB

The number one Study Buddy to get your qualification for the tech-industry

DBA3702 - Descriptive Analytics with R

SA1 - Group 4
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Benjamin Thien Zong Jun (A0252813J)
Vootla Kowsalya Nitya (A0161440U)
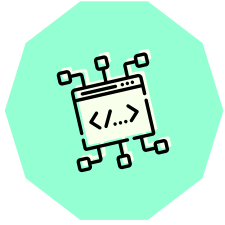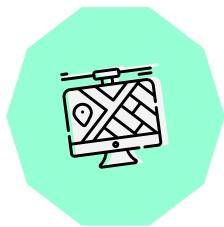Wu Xingbei (A0271272J)

Table of contents

01

Introduction

Background
Current Market Practices and Pain Points
Business Problem Statement

17.3%

Singapore's digital economy sector contribution to GDP

Background

Recognizing the evolving job market, our app aims to bridge the skills gap by providing easily accessible curated free content.

Digital Economy Growth in Singapore:
- Singapore's digital economy's GDP contribution has increased by 2X from 2022 to 2023 at $106 bn

Tech Skills in Demand:
- A Ministry of Manpower report identifies key transferable skills crucial for various jobs, including e-commerce, artificial intelligence, digital marketing, and data analytics.

Current Market Practices

1. Diverse Learning Platforms that recommend some videos for popular subjects: Coursera, edX, Udemy, Codecademy, freeCodeCamp, DataCamp, and Eduonix Learning Solutions

2. Degree Offerings in Tech

3. Paid Courses and Certifications with examinations.

Pain Points

1. Fragmented services can be overwhelming and do not cater to job specific searches.

2. Difficulty in acquiring specialized skill sets for a job track without enrolling in a specialized course

3. Existing services involve a monetary commitment which is not ideal for users seeking to merely access and learn content

The young student

- I'm not sure what job tracks are available in the tech industry

- What technical and soft skills do employers look for when trying to hire candidates for these jobs?

- What good free content can I refer to hone the skills needed for these jobs?

- There are too many platforms out there and I'm not sure if I want to spend the money to learn these skills just yet...
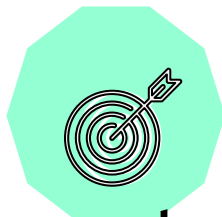
Business Problem Statement

TechJ.SB aims to become the **leading online education provider for tech industry job-related skills.**

The objective is to provide high-quality, up-to-date educational materials tailored to individual customer preferences to support clients in exploring and achieving their career goals
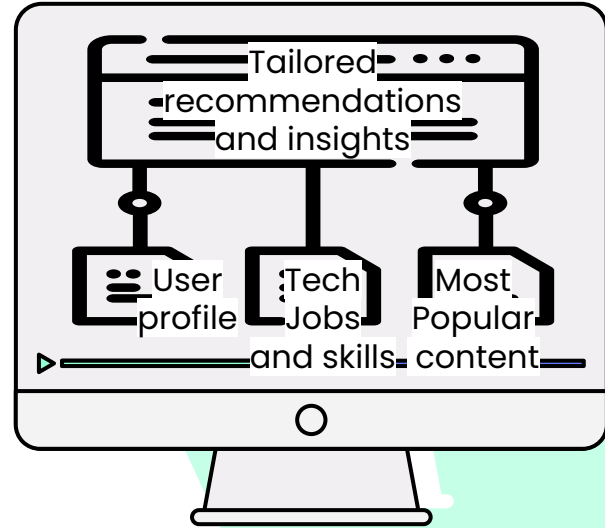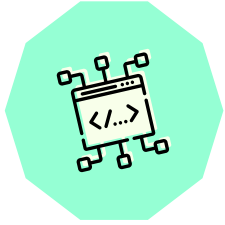
Product Overview

TechJ.SB is a one-stop app tailored for pre-university students and university students, helping them to

1. Explore from a list of top tech job categories consolidated from top tech employers' job database
2. View the list of job paths, relevant skills, and learning content.

02

Operational

Marketing and Sales Strategy
Management Structure

Marketing Strategy

Initial Marketing Focus

Engaging with local schools, pre-university education institutions and universities in Singapore.

Expansion Strategy

Transition to paid online advertisements (e.g. Facebook Ads and Google Search Ads)

Growth & Future Plans

Increase online advertising campaigns and expand overseas

Sales Strategy

Freemium Business Model

1. **Free** access to an initial set of recommendations and lessons for one job track.
2. **Paid** subscription to unlock more job tracks, advanced features such as job popularity, peer insights, and personalized prioritization and recommendations.
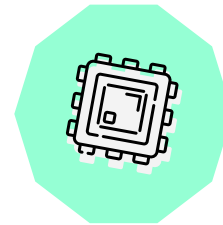
Advertising

Limited, targeted advertising space for educational content creators
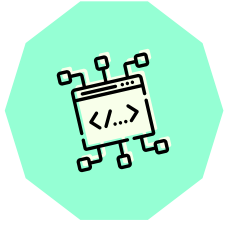
03

Product

Data
Tech J.SB's features
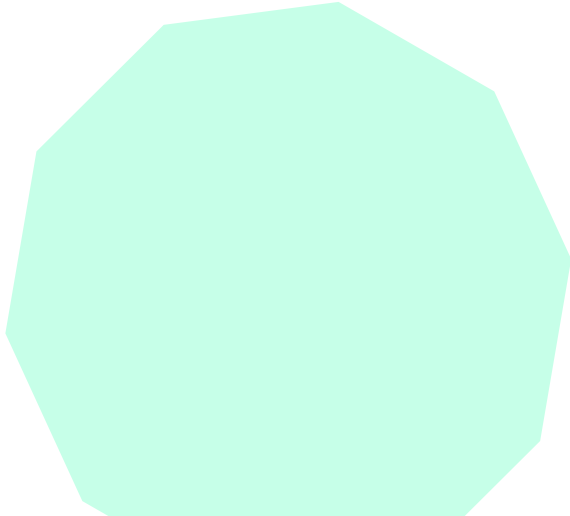
Data Collection & Preparation
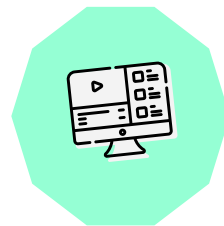
User Data Simulation

- Simulated User Data using Singapore Education Statistics Digest: demographics, education levels, gender distribution, specialization probabilities, free time, internships, and technical skills proficiency
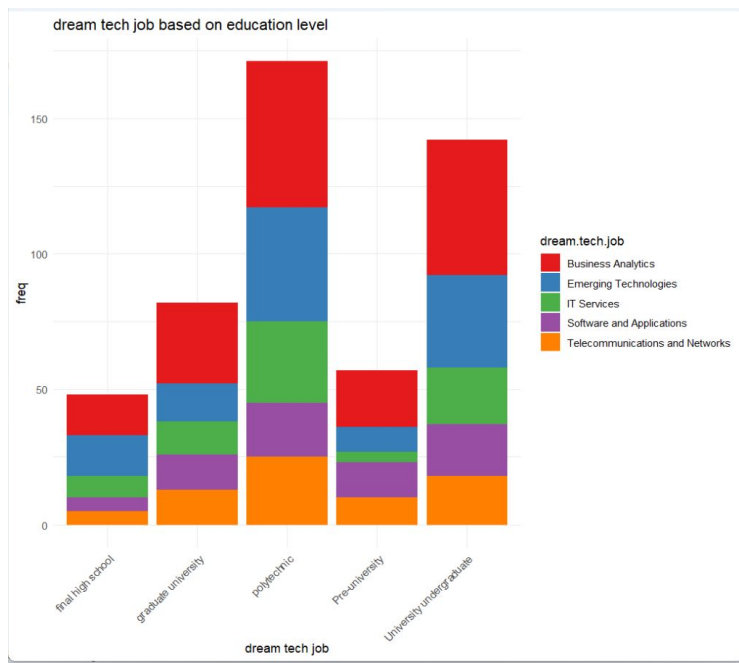
Job Categories & Skills

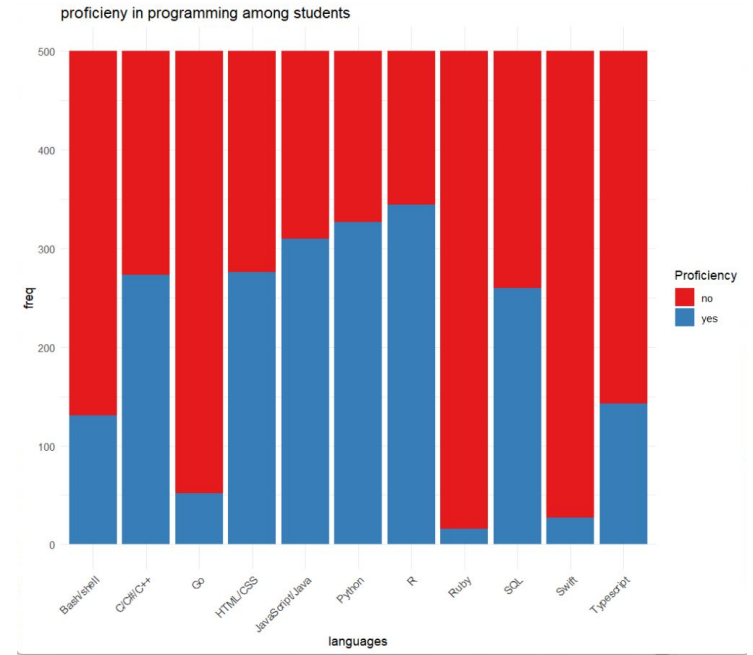- Downloaded as csv file from google jobs data set available on kaggle

Content by Skills

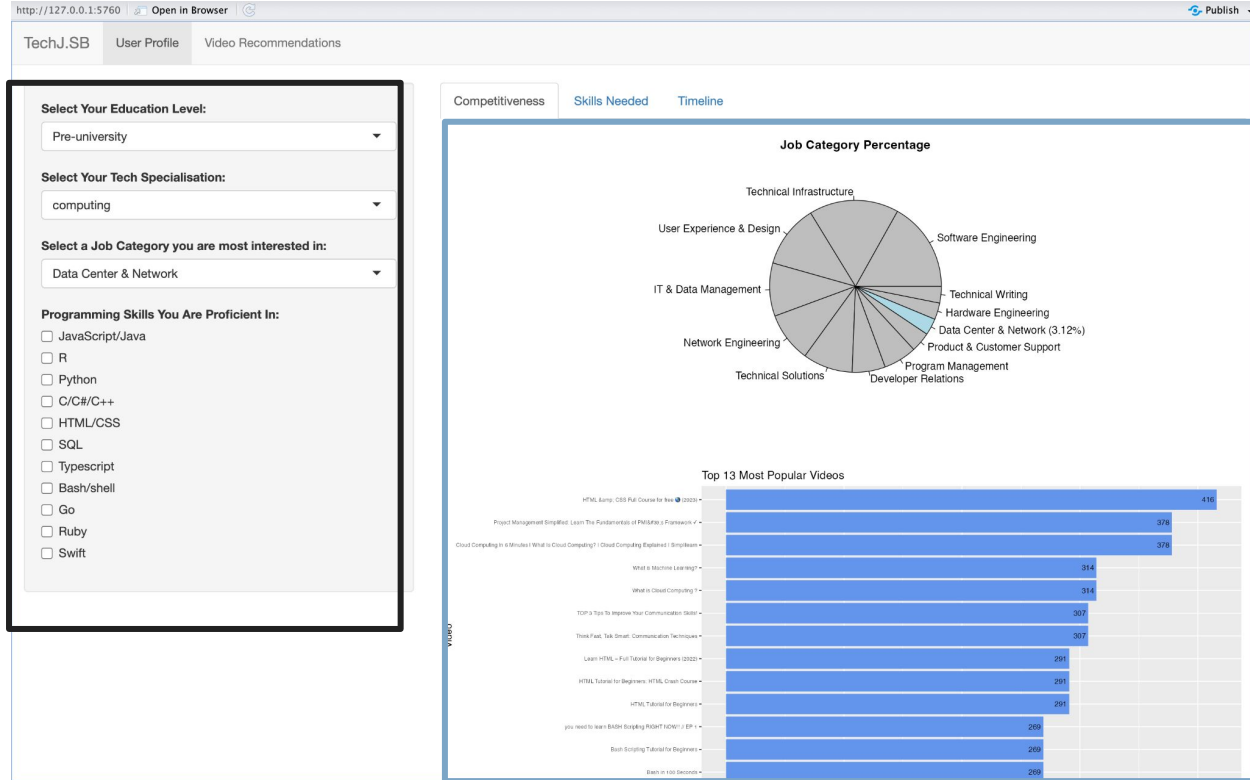- Scraped from YouTube based on skills obtained from google jobs requirements
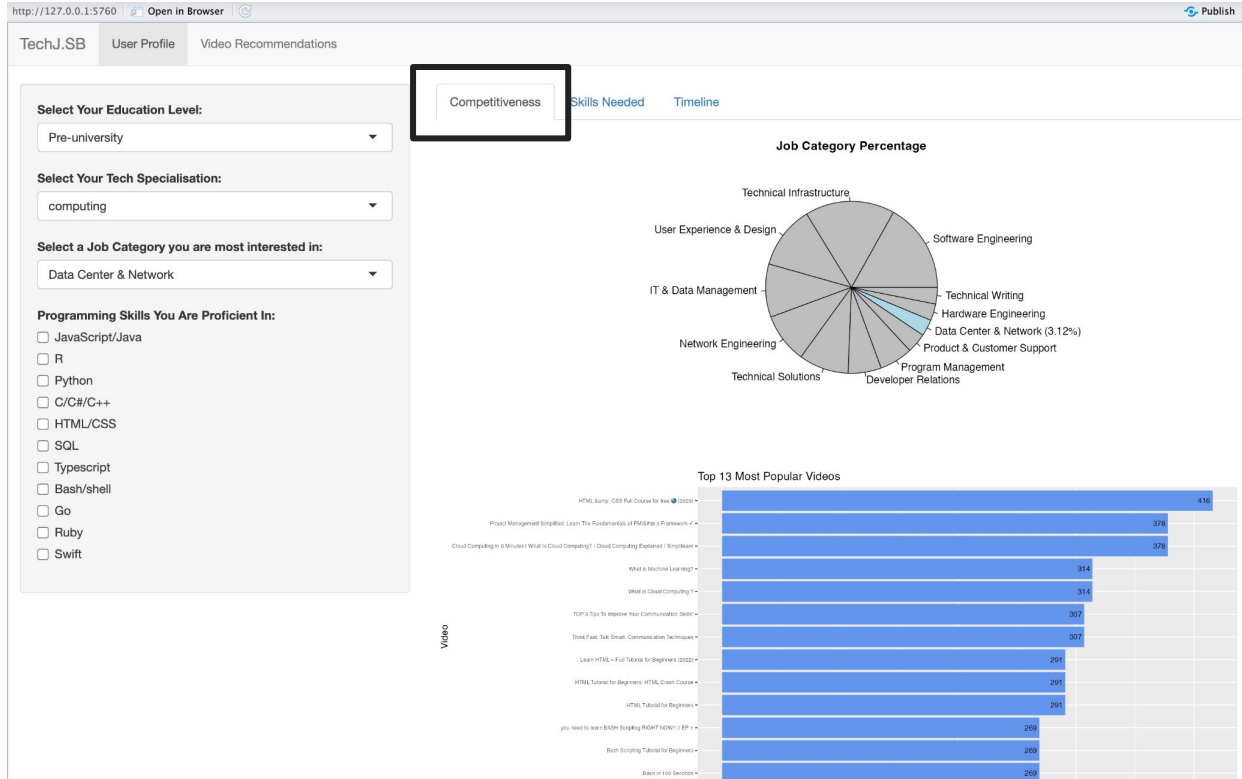
User Data Insights

dream tech job based on education level

dream tech job based on gender

User Data Insights

dream tech job among different specializations

dream.tech.job
- Business Analytics
- Emerging Technologies
- IT Services
- Software and Applications
- Telecommunications and Networks

proficieny in programming among students
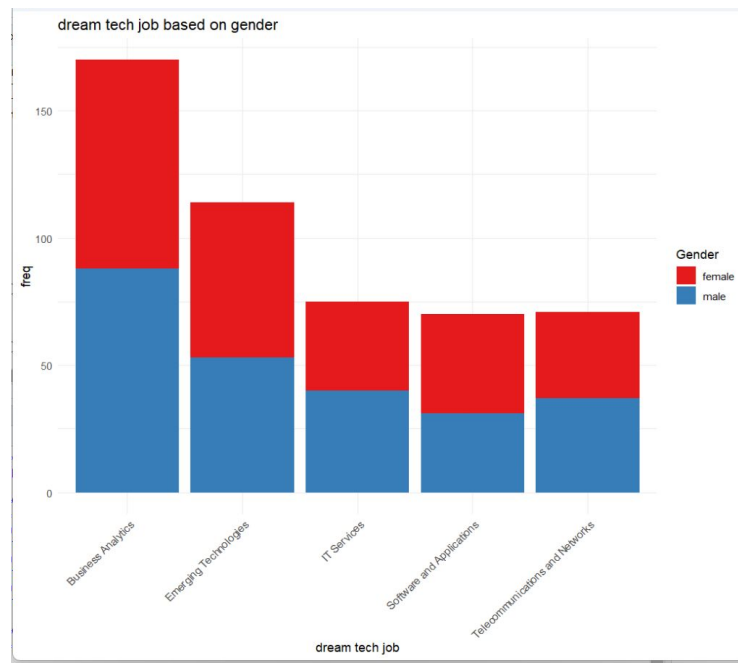
Proficiency
- no
- yes
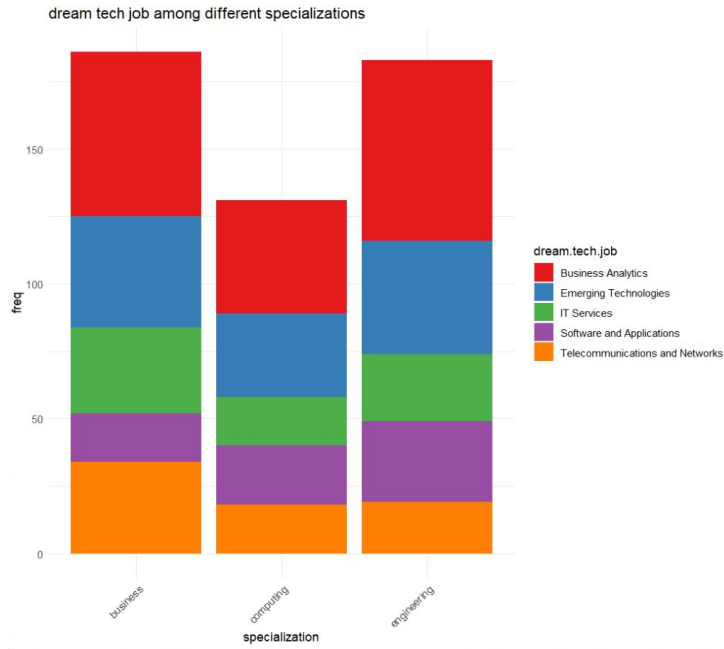
Introducing TechJ.SB

Control Panel

Visualisation

Competitiveness

Competitiveness

①

Job Category Percentage

Technical Infrastructure
User Experience & Design
Software Engineering
IT & Data Management
Technical Writing
Hardware Engineering
Data Center & Network (3.12%)
Product & Customer Support
Network Engineering
Program Management
Technical Solutions
Developer Relations
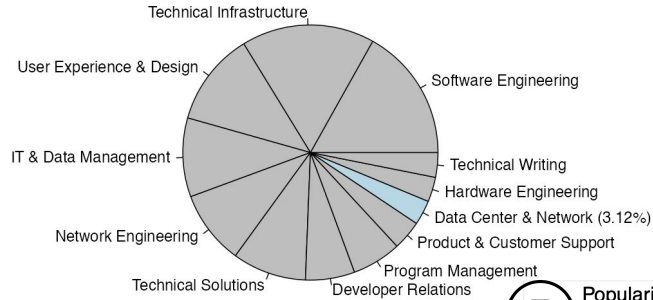
②

Top 13 Most Popular Videos

Video	Views
HTML & CSS Full Course for free ... (2023)	416
Project Management Simplified: Learn The Fundamentals of PMI's Framework ...	378
Cloud Computing In 6 Minutes	What Is Cloud Computing?	Cloud Computing Explained	Simplilearn	378
What is Machine Learning?	314
What is Cloud Computing ?	314
TOP 3 Tips To Improve Your Communication Skills!	307
Think Fast, Talk Smart: Communication Techniques	307
Learn HTML ... Full Tutorial for Beginners (2022)	291
HTML Tutorial for Beginners: HTML Crash Course	291
HTML Tutorial for Beginners	291
you need to learn BASH Scripting RIGHT NOW!! // EP 1	269
Bash Scripting Tutorial for Beginners	269
Bash in 100 Seconds	269

③

Popularity of Dream Technical Jobs

Number of People — Job Categories

	Number
BA	157
ET	113
IT	86
SA	80
TN	64

Category
- Business Analytics
- Emerging Technologies
- IT Services
- Software and Applications
- Telecommunications and Networks
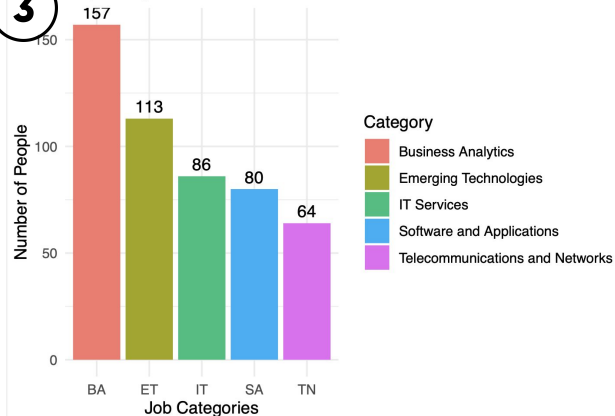
Skills Needed

● Illustrating the prevalent skills necessary for the selected job
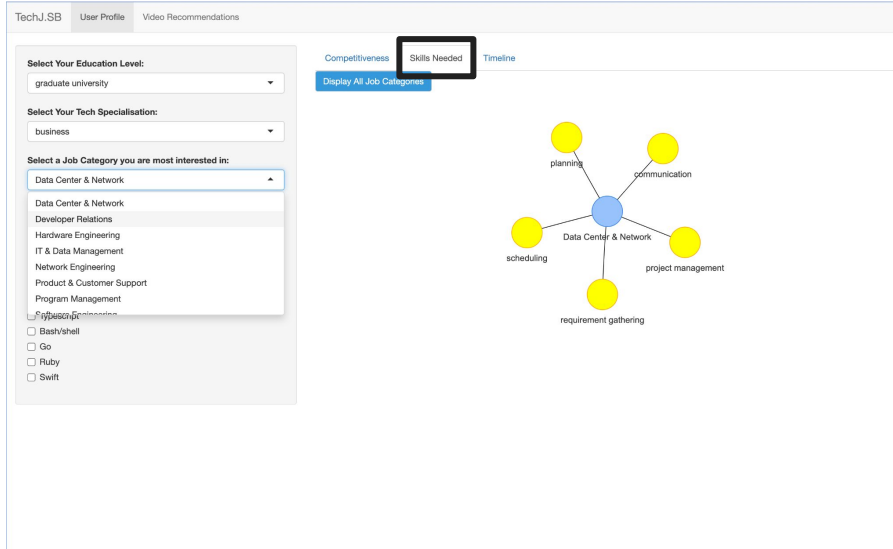
Step 1

Step 2
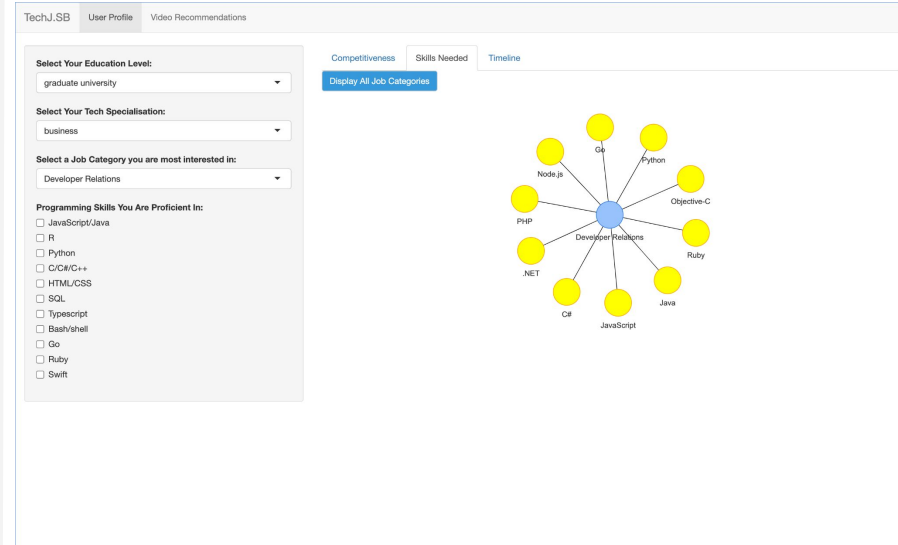
Skills Needed

- Overview of the skill landscape in the tech industry
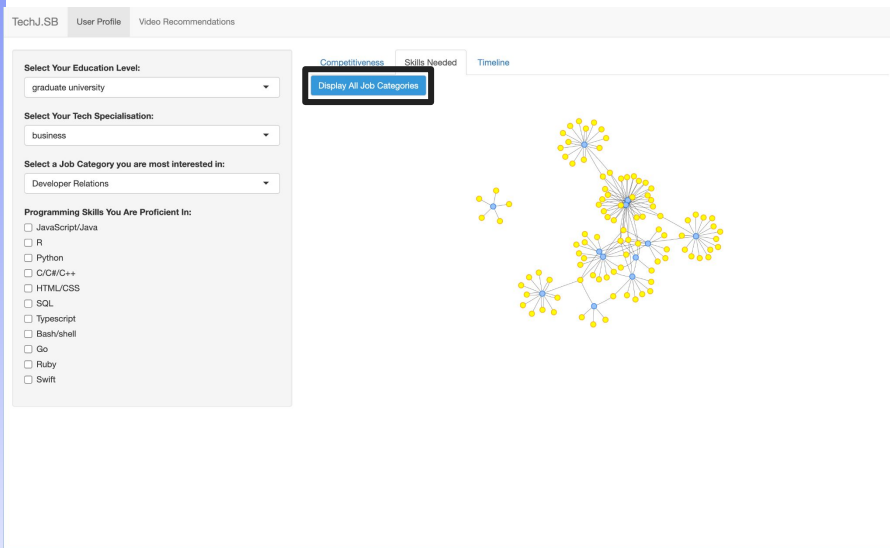
Step 3

Step 4

Timeline

Video Recommendations

Select Your Education Level:

graduate university ▾

Select Your Tech Specialisation:

business ▾

Select a Job Category you are most interested in:

Developer Relations ▾

Programming Skills You Are Proficient In:
- ☐ JavaScript/Java
- ☐ R
- ☐ Python
- ☐ C/C#/C++
- ☐ HTML/CSS
- ☐ SQL
- ☐ Typescript
- ☐ Bash/shell
- ☐ Go
- ☐ Ruby
- ☐ Swift
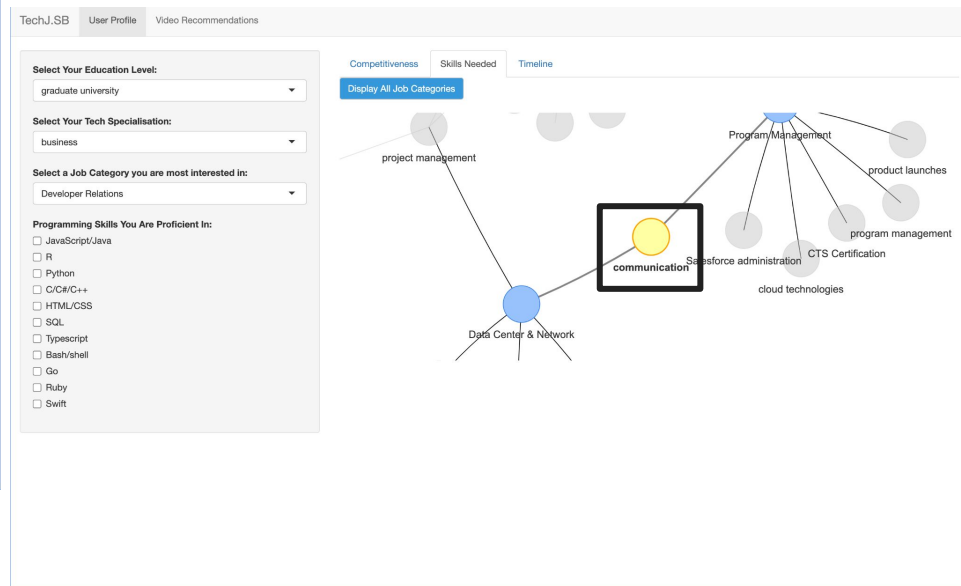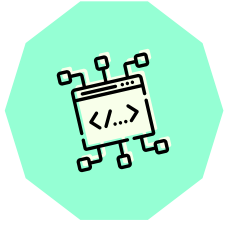
TechJ.SB   User Profile   **Video Recommendations**

Video Duration Analysis

Show 100 ▾ entries   Search:

	Category	Title	Readable_Duration	Video_URL
1	project management	Intro to Project Management	Google Project Management Certificate	07:33	Link
2	project management	Project Management Simplified: Learn The Fundamentals of PMI's Framework ✓	50:41	Link
3	project management	Project Management Full Course In 8 Hours	Project Management Training	Simplilearn	08:06:06	Link
4	project management	How to Become Project Manager?	Roadmap to Become a Project Manager in 2023	Simplilearn	12:59	Link
5	project management	PROJECT MANAGER Interview Questions & ANSWERS! (How to PASS a Project Management Job Interview!)	14:45	Link
6	project management	Project Management Basics [QUICK GUIDE]	04:56	Link
7	project management	A sixth sense for project management	Tres Roeder	TEDxCWRU	15:40	Link
8	project management	The Complete Project Management Body of Knowledge in One Video (PMBOK 7th Edition)	01:01:21	Link
9	project management	A day in the life of a Project Manager	Work from home edition	14:45	Link
10	project management	A Day in the Life of a Project Manager	Indeed	08:31	Link
11	Android	#TheAndroidShow: the latest for Android devs, in 60 seconds!	01:36	Link
12	Android	iPhone vs Android (The Real Winner!)	18:27	Link
13	Android	8 New Useful Android Apps You Must Try!	05:27	Link
14	Android	ViewModels & Configuration Changes - Android Basics 2023	18:46	Link
15	Android	What's Happening To Android?	13:44	Link
16	Android	iPhone vs Android	00:59	Link
17	Android	Why I Switched to iPhone From Android	What most reviews don't tell you!	10:44	Link
18	Android	Android KITKAT 4.4 - Android Animation - Boat	00:29	Link
19	Android	Top Android Apps! (October 2023)	09:39	Link

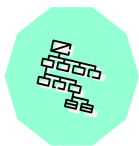# Video Recommendations

04

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Development

Limitations
Conclusion

Limitations

Next Steps

Job Category & Skills

- App is based on data obtained from all of Google's job postings worldwide
- There may be other firm and domain specific skill sets that are not included in the app's recommendations.

Include data from other popular tech firms in various verticals such as social media, e-commerce etc.

Content Data

- YouTube is used as the only source of data for this version of the app as it is the most accessible free content via web scraping.

Form partnerships with other MOOCs to scrape data and curate free content across multiple discrete sources

User Simulation Data

- The simulation of user attitudes relies on various assumptions.

As the app grows, it will pivot to using actual user input for the app's general features

Conclusion

Transformative solution to the prevalent challenges in the online education market, **particularly within the tech industry**

1. Address the fragmentation and lack of specialization in existing platforms
2. Simplifies the overwhelming diversity of available courses

Go-to platform for users to receive high-quality and up-to-date educational content