

Grizzly Paths

Mapping the Road to Opportunity



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ABSTRACT

Our Data Science and Analytics Capstone team, Grizzly Gang, is collaborating with GGC alumnus and DSA professional Hugh Smith, under the guidance of Dr. Anca, to develop a career-planning website for IT students. The website lets users select a desired job (e.g., software developer) and then displays the relevant skills and corresponding courses.

TECHNOLOGIES & METHODOLOGIES

- Web scraped from job sites such as LinkedIn, Glassdoor, and Indeed
- Extracted keywords and skills from job descriptions and titles
- Utilized data from previous semesters
- Bright Data
- Google Colab, PowerBI
- GitHub https://github.com/GGC-DSA/itskills
- Python
- Vue.js, Visual Studio Code



Checkout our Colab notebook here!

ANALYSIS

Keyword Matching: Extracted top 10 skills and job titles for each major field (e.g., software development, data science).

Application: Integrated findings into website that recommends skills and courses.

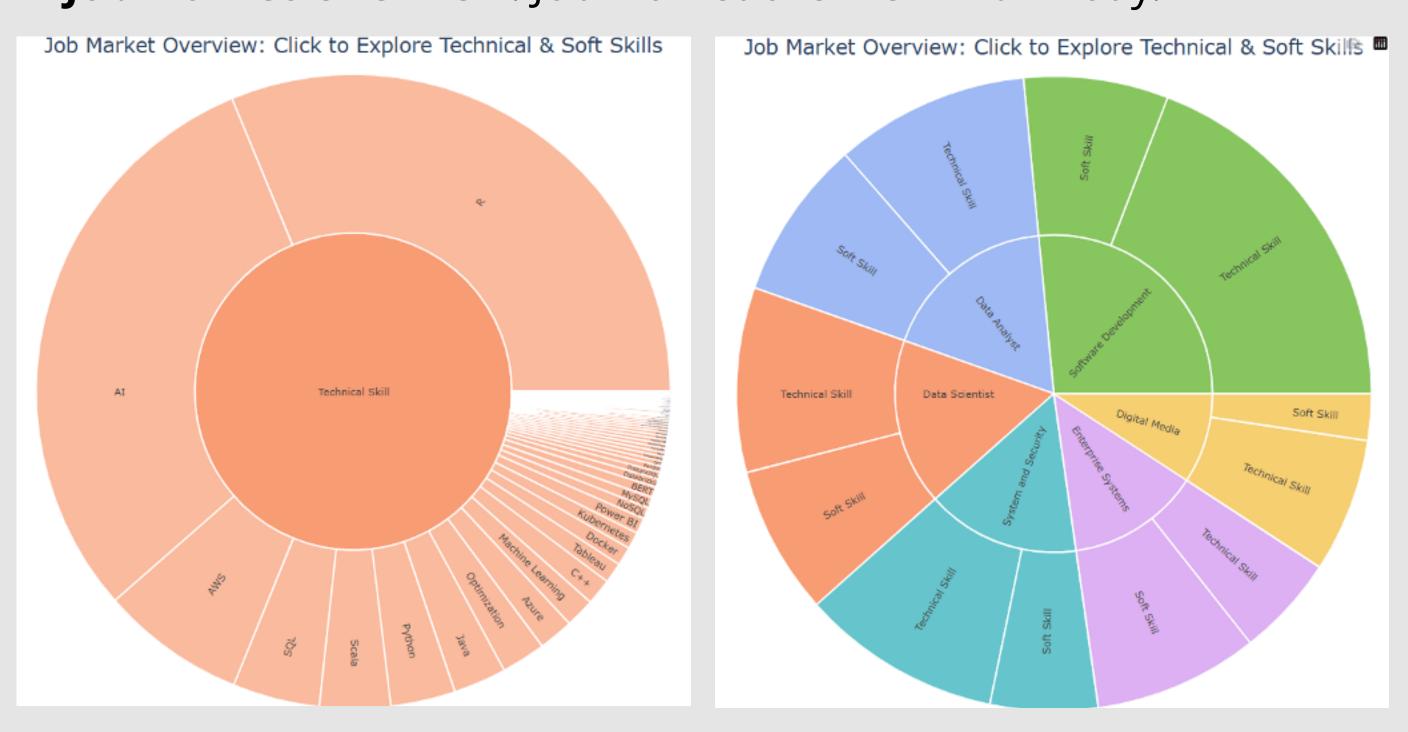
Data Analysis: Analyzed job titles, fields, and required skills.

	Keyword	Count
77	Developer	106
0		86
4	Software Engineer	
1	Software Developer	32
78	Project Manager	30
34	Data Scientist	29

	Keyword	Count
1	R	2571
50	Al	2484
35	Excel	1306
2	SQL	366
0	Python	272

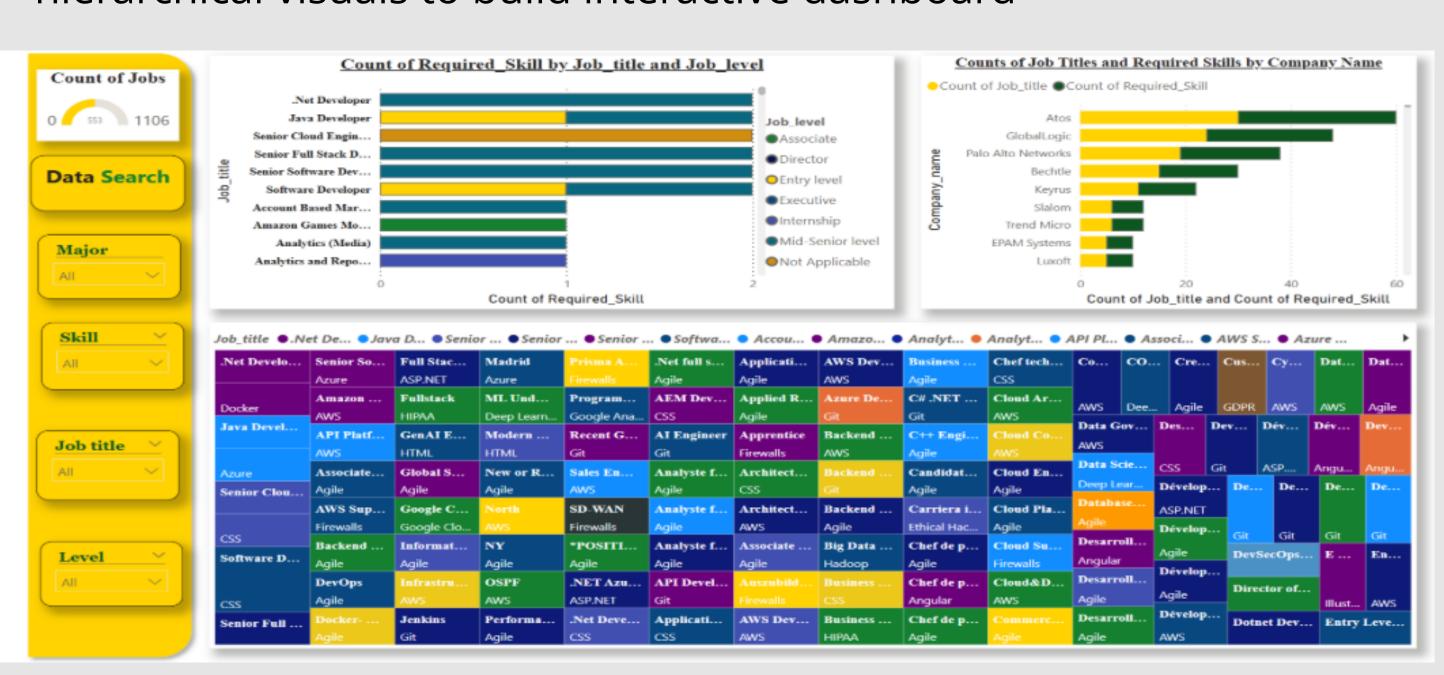
RESULTS - IT CONCENTRATION

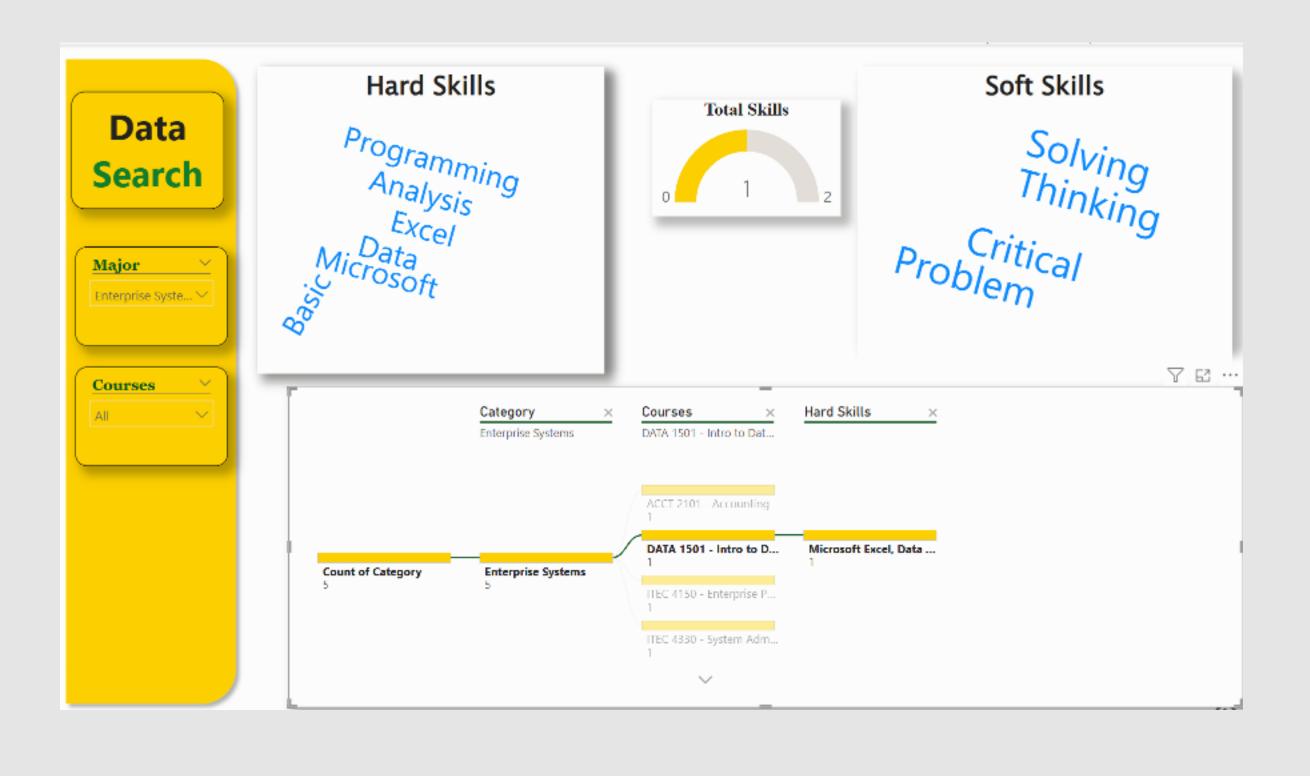
- Job Market Overview: Job market overview with Plotly.



RESULTS - DASHBOARD

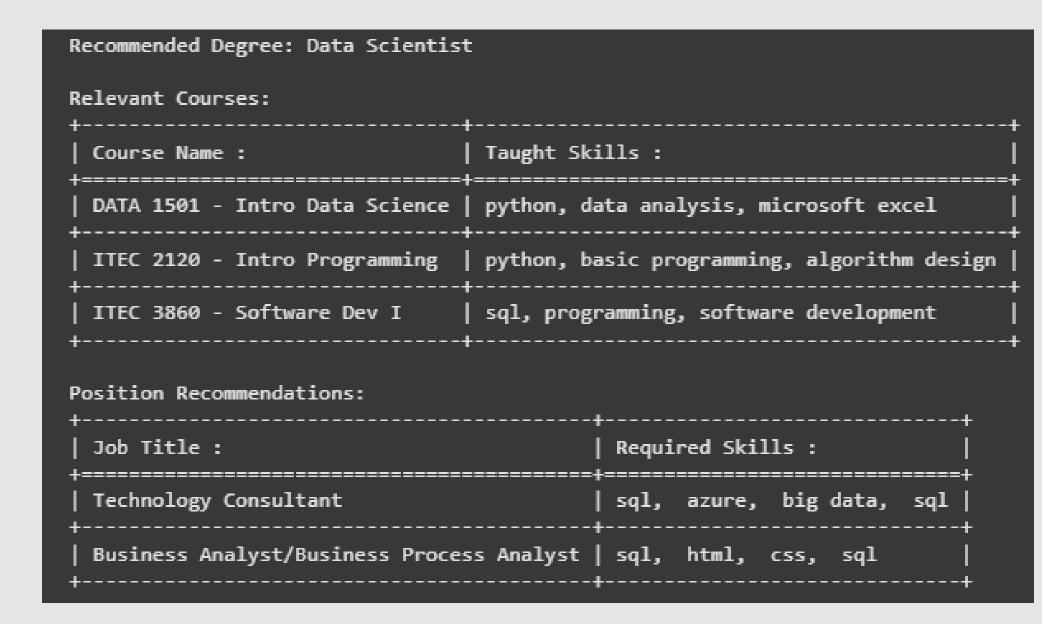
- Interactive Dashboard: Used Power Bi with slicers, drill through, and hierarchical visuals to build interactive dashboard





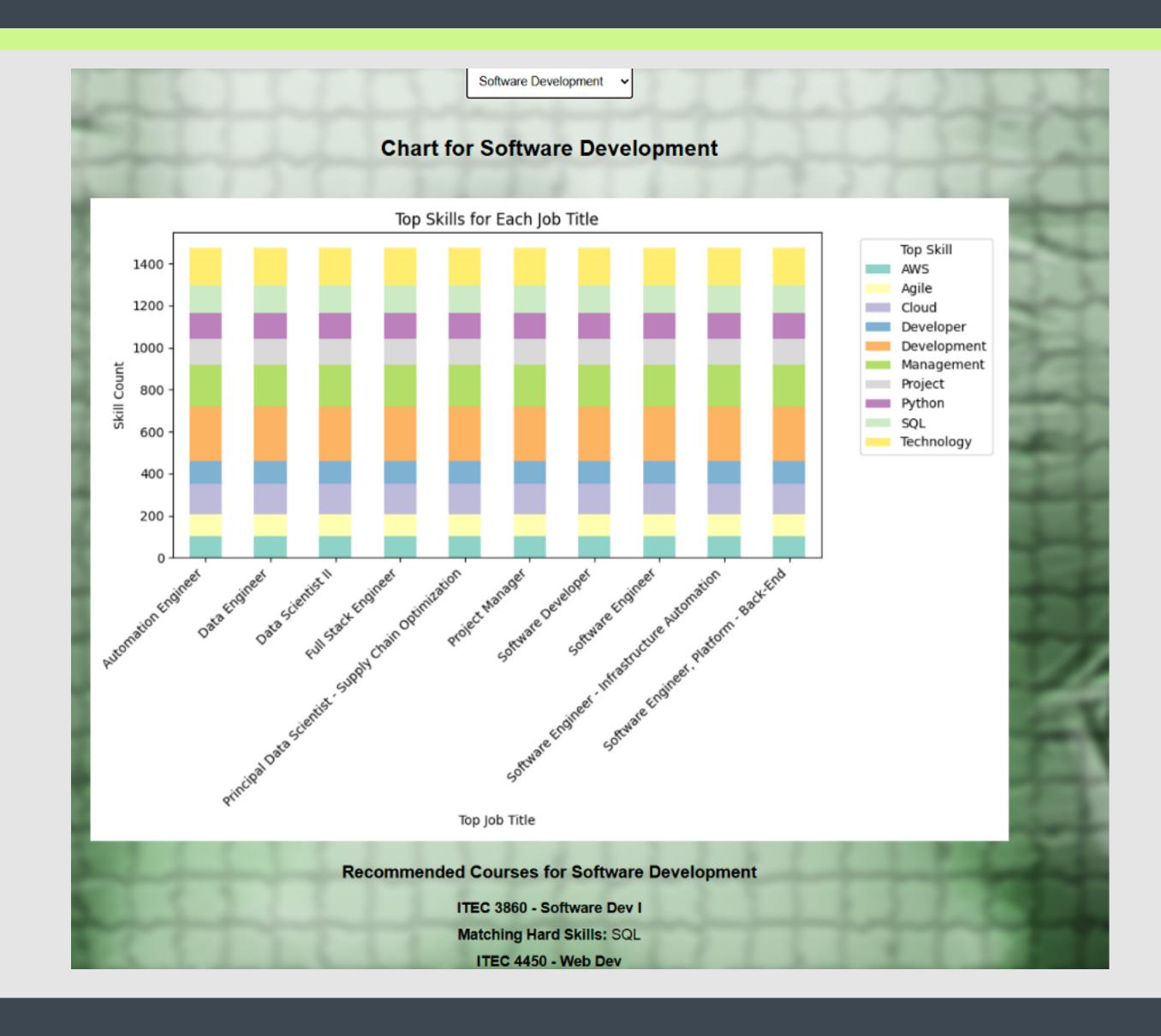
RESULTS - INTERACTIVE CHATBOT

- **Chatbot** developed to calculate and compare proportions of keyword counts in user input and data records and returns records having greatest proportion of keywords selected



*Visuals of primary iterations of interactive visuals on website

RESULTS - WEBSITE FOR STUDENTS



FUTURE PLANS

- Complete website design, implementation, and deployment
- Complete dashboard