FIT3179

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Assignment 2: Data Visualization II

Visualization Report: Exploring Tech Job Market in Australia

The domain, the why and the who:

I focused on the rapidly expanding tech job market in Australia. As I'm a tech enthusiast myself and graduating this year, I decided to work on this as it's of my interest and is quite a unique domain aligning the domain rules.

My main goal was to create a visualisation that provides insight into salary distribution, job opportunities, and company preferences across different regions of tech sector. I designed the visualization with job seekers, policymakers, and industry professionals in mind, especially those looking to understand the current trends and high-demand roles in Australia's tech sector.

What: The data (sources, authors, relevance, creation process, etc:

I used public datasets from the and kaggle , *data.gov.au*, seek dataset which included information on job salaries and company sizes across Australia. I cleaned and processed the data to make it relevant for my visualizations, highlighting trends in salaries, demand for specific job titles, and differences between private and public sector opportunities. This data is particularly useful because it reflects recent growth in the tech industry and can guide individuals in making career decisions based on the latest trends.

Visualization Choices and Rationale:

To make the insights easily understandable, I carefully selected visualization idioms based on their ability to clearly convey complex data:

1. **Choropleth Map (Salary Distribution by State)**: I used this map to highlight geographical salary disparities, with metropolitan areas like Sydney and Melbourne showing the highest tech salaries. This idiom allows users to quickly spot regional differences, making it easier for job seekers to identify where the best-paying opportunities are.
2. **Box Plot (Estimated Salary by Job Titles, with respect to Company Size)**: The box plot showcases salary ranges across various tech job titles. I felt this was the best way to display salary variation within job categories, as it allows users to easily compare entry-level and top-tier salaries. This also reflects the complexity and sophistication of the data visualisation
3. **Treemap (Job Title Frequencies)**: I included this treemap to emphasize which tech roles are most in demand. Software Engineers and Data Analysts stand out, and the

treemap format helps users see how these roles dominate the market relative to others.

4. **Donut Chart (Breakdown of Jobs by Private vs Public Sector)**: The donut chart visually breaks down the share of jobs between private and public sectors, emphasizing the dominance of private companies in job creation. It offers a simple yet effective way for users to compare sector opportunities.
5. **Bar Chart (Top High-Paying Data Jobs)**: To give an overview of the most competitive salaries in tech, I used a bar chart to highlight the top-paying data roles. This chart helps viewers quickly grasp which roles offer the highest compensation.

Special Features and Interactivity: I added several custom features, such as a consistent color scheme to maintain clarity, and interactive elements like filters, so users can focus on specific job types or regions. Additionally, the narrative I provided alongside the visualizations guides users through the key findings, like how private companies lead in tech job creation, which adds context to the raw data.

Design Considerations: In terms of design, I ensured that the layout is symmetric and well-balanced for easy navigation. The font and typography were chosen to ensure readability while maintaining a professional tone. I also utilized white space effectively to prevent clutter, ensuring that each visual has room to stand out without overwhelming the viewer.

Conclusion: Through this visualization, I aimed to make it easier for job seekers and industry professionals to explore the growing opportunities in Australia's tech job market. By combining various visual idioms and adding interactive features, I believe this visualization serves as a practical tool for individuals to understand salary trends, job demands, and sector growth, enabling them to make more informed career decisions.