

Childcare Cost Analysis

Design Summary and Visualization Choices

Komal Shahid

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Childcare Cost Analysis Dashboard - Design Summary

Overview

This document provides a summary of the design decisions and visualization choices made in the Childcare Cost Analysis Dashboard. The dashboard aims to present a comprehensive analysis of childcare costs across different states, income levels, and time periods.

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Design Decisions

Color Schemes

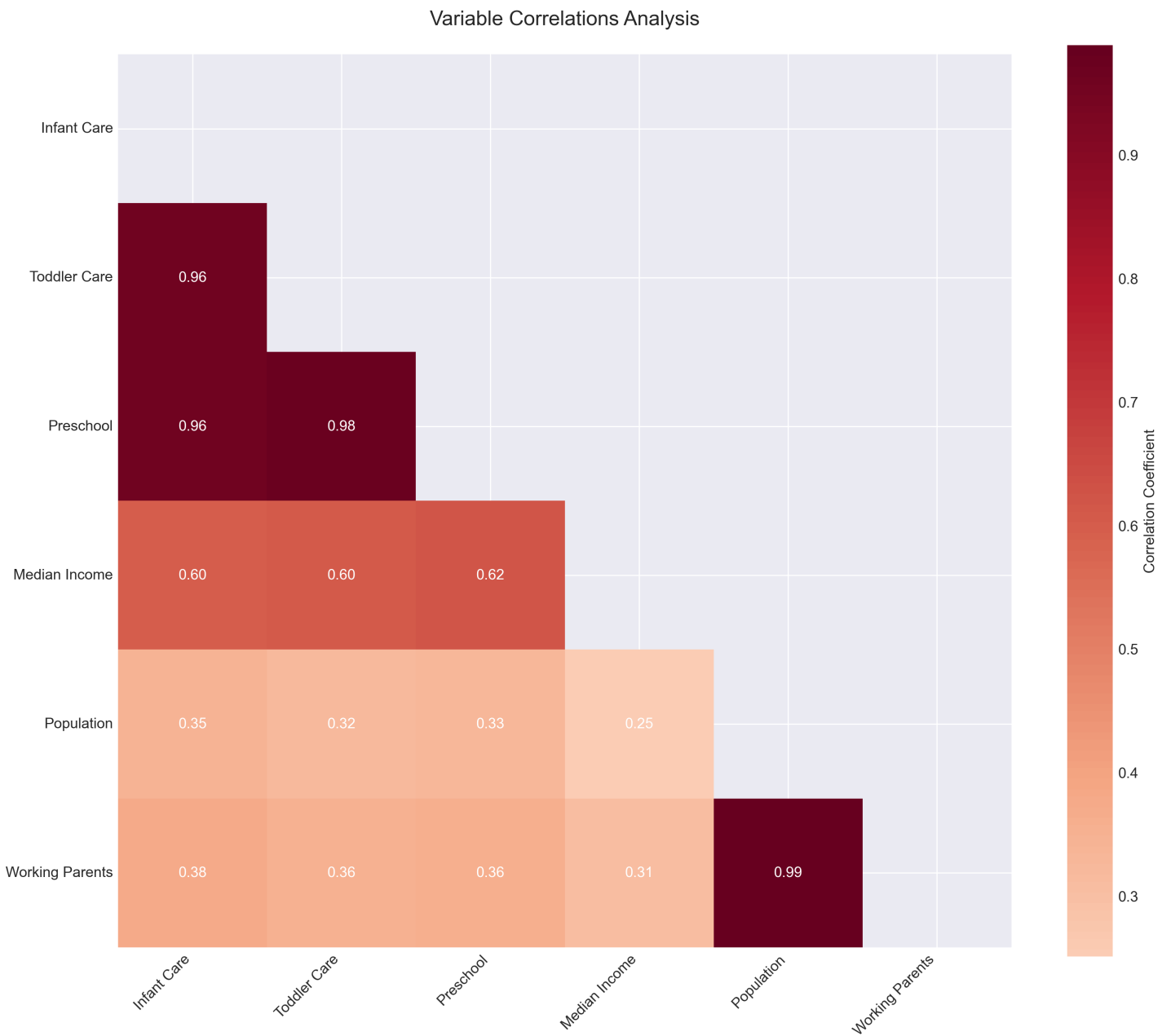
- Geographic Visualizations: Used Viridis color palette for colorblind-friendly visualization
- Income Level Analysis: Implemented Set3 qualitative colors for distinct income brackets
- Correlation Analysis: Utilized RdBu_r diverging color scheme for correlations

Layout and Organization

- Dashboard Structure: 3x2 grid layout for six key visualizations
- Spacing: 15% vertical and horizontal spacing between subplots
- Margins: Generous margins for text readability

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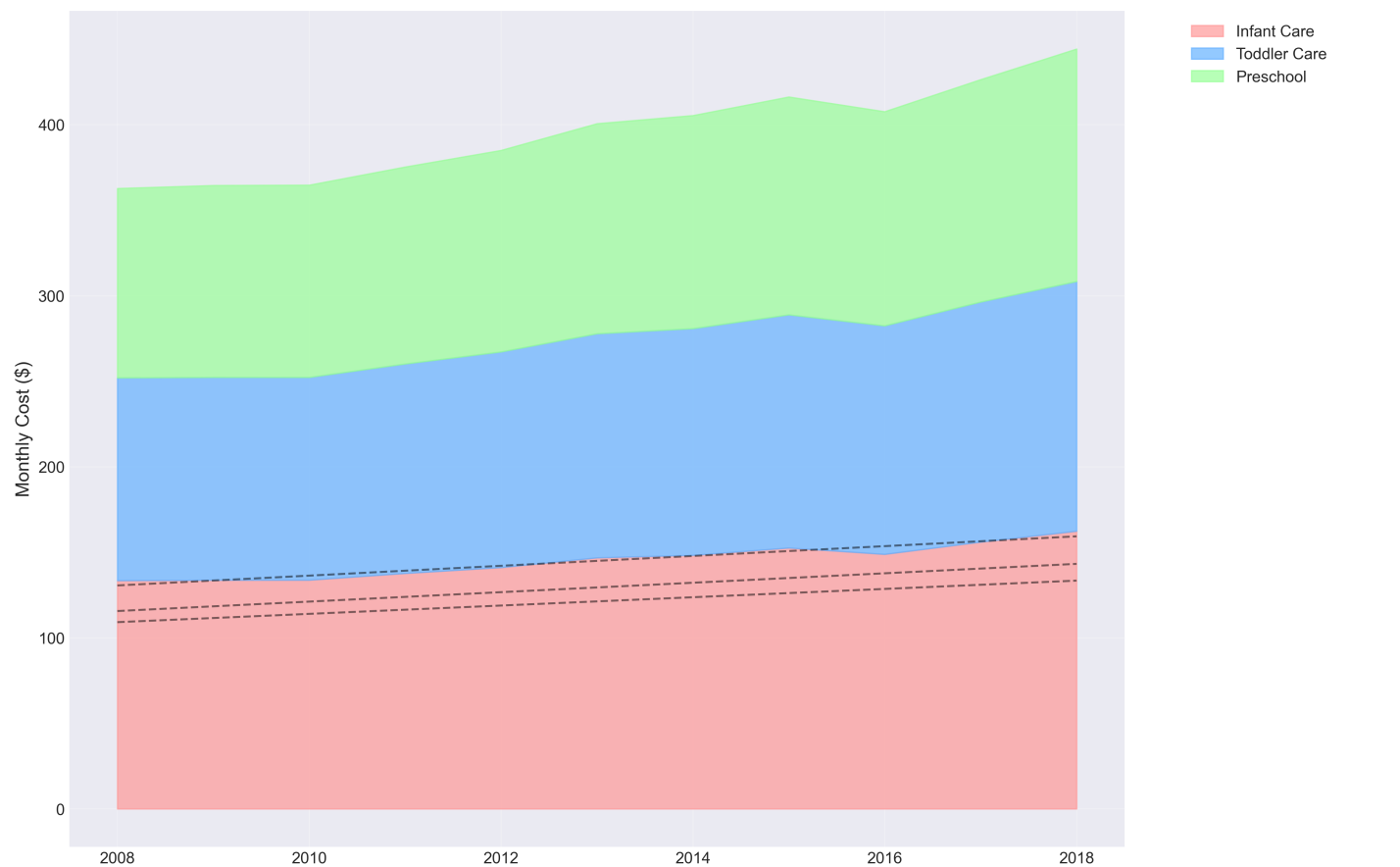
Visualizations



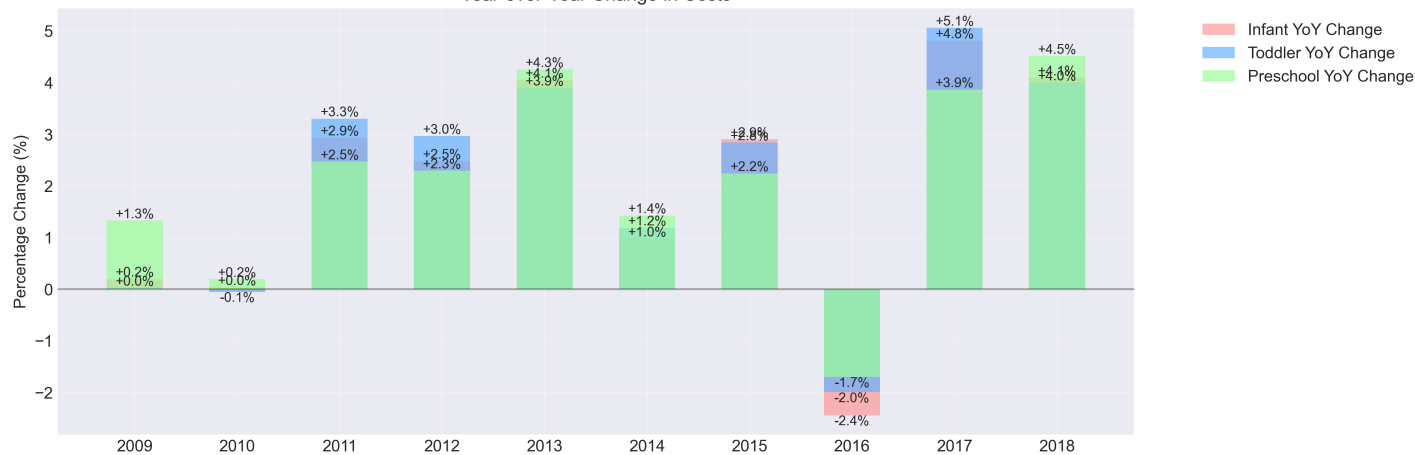
Correlation Analysis: Heatmap showing relationships between variables

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Temporal Analysis of Childcare Costs
Stacked Area Chart with Trend Lines



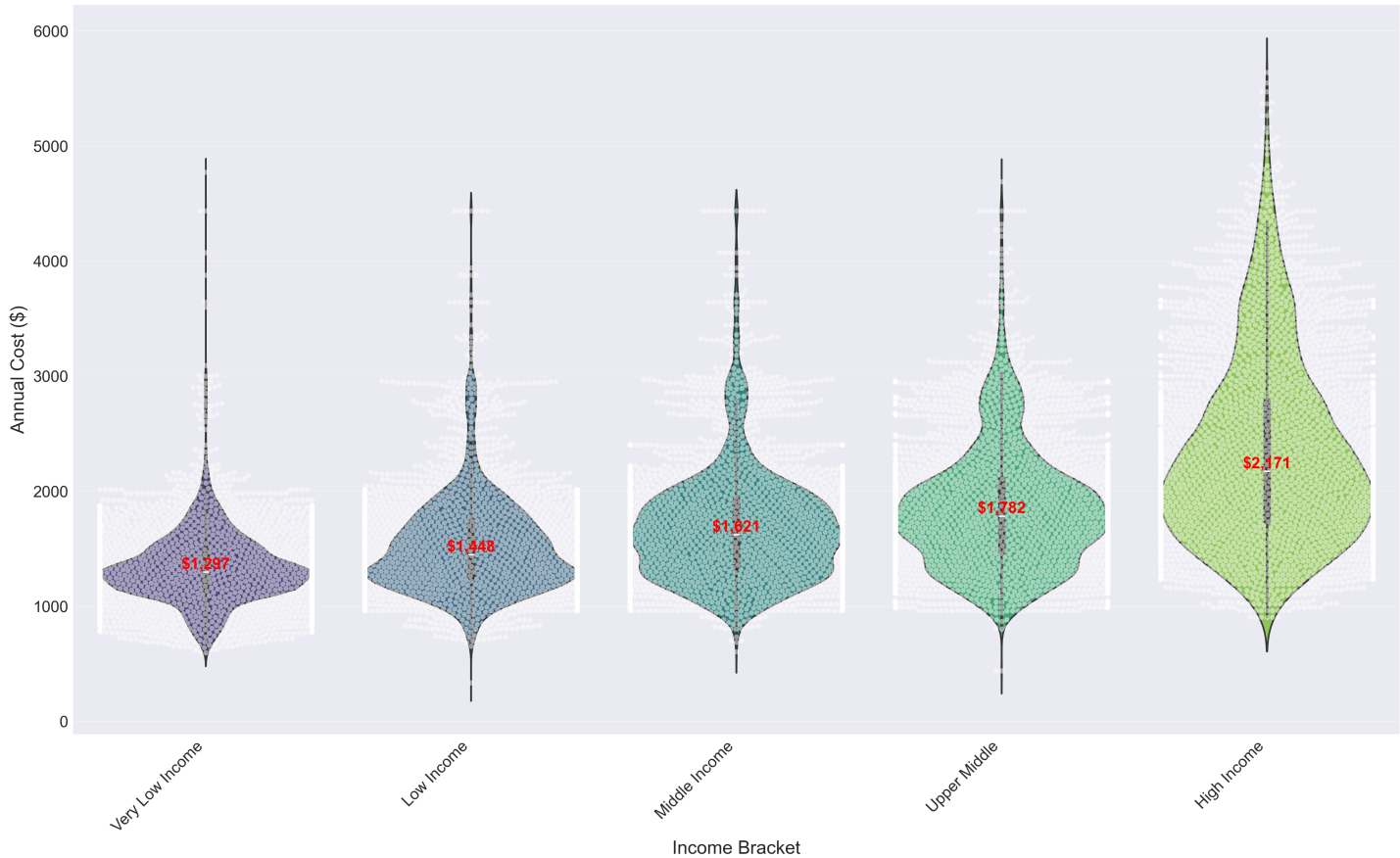
Year-over-Year Change in Costs



Time Series Analysis: Trends in childcare costs over time

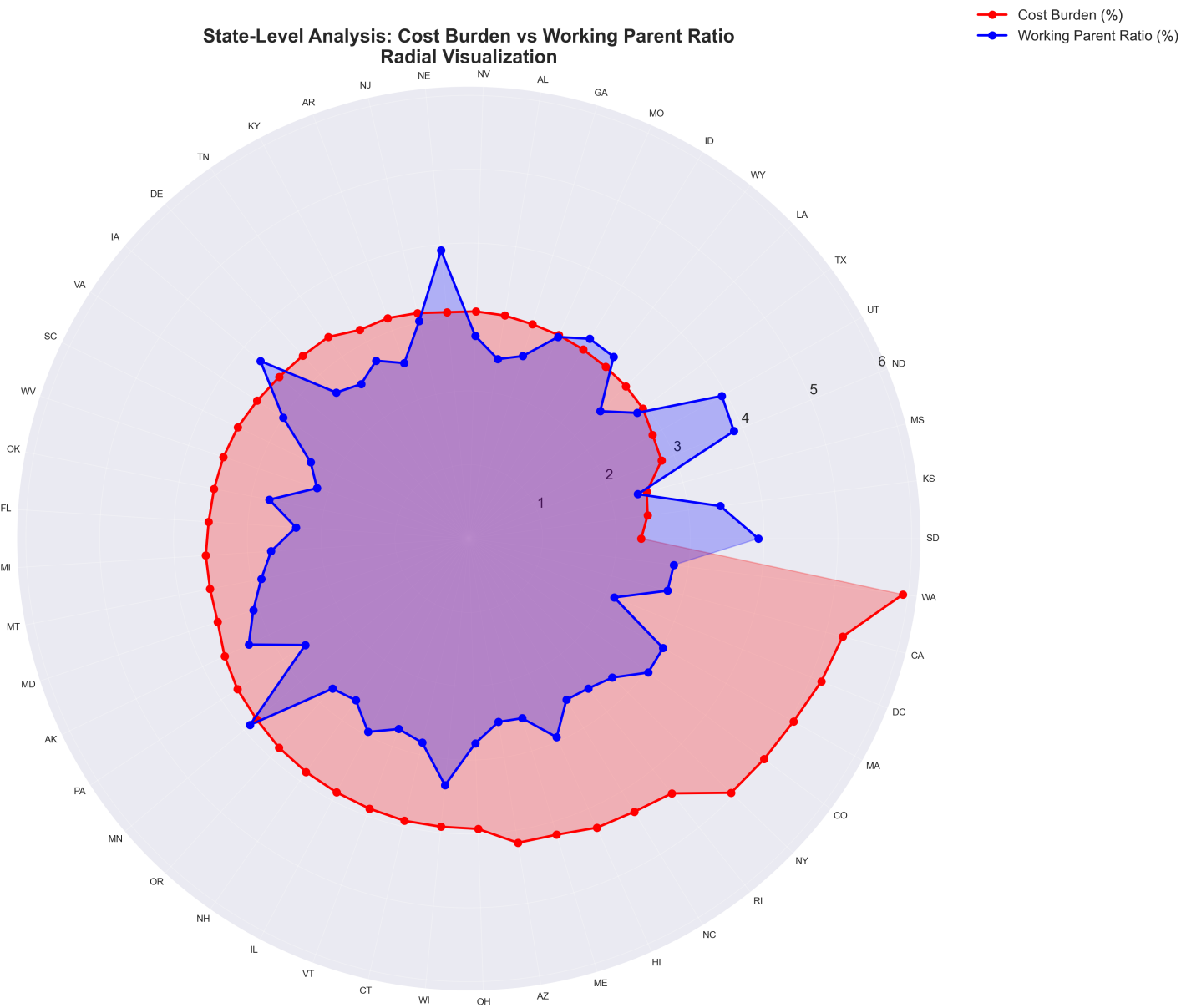
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Distribution of Annual Childcare Costs by Income Level
Violin Plot with Data Points



Cost Distribution: Analysis by income levels

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State Analysis: Geographic distribution of costs

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Technical Implementation

- Plotly for interactive visualizations
- Seaborn for statistical visualizations
- Matplotlib for static plots
- Pandas for data manipulation