

Health Insurance Cost Prediction & Analysis

 *End-to-End Data Science & Visualization Project*

Project Overview

This project focuses on analyzing health insurance data to understand **premium pricing, risk factors, demographic insights**, and to **predict insurance costs using machine learning**.

It combines **data analysis, Tableau dashboards, machine learning, deployment concepts, and technical storytelling**.

Project Links

Tableau Public Dashboards

- **Summary Statistics Dashboard**
https://public.tableau.com/app/profile/samaresh.pradhan8545/viz/SummaryStatistics_17659531340500/SummaryStatistics?publish=yes
 - **Premium Pricing Analysis Dashboard**
<https://public.tableau.com/app/profile/samaresh.pradhan8545/viz/PremiumPricingAnalysis-Dashboard/PremiumPricingAnalysis?publish=yes>
 - **Risk Factor Analysis Dashboard**
<https://public.tableau.com/app/profile/samaresh.pradhan8545/viz/PremiumPricingAnalysis-Dashboard/RiskFactorsAnalysisDashboard?publish=yes>
 - **Demographic Insights Dashboard**
<https://public.tableau.com/app/profile/samaresh.pradhan8545/viz/PremiumPricingAnalysis-Dashboard/DemographicInsightsDashboard?publish=yes>
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GitHub Repository

- **Source Code & Project Files**
https://github.com/skpradhan-repo/Insurance_Cost_Prediction
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Loom Video (Project Walkthrough)

- **End-to-End Explanation & Dashboard Walkthrough**
<https://www.loom.com/share/4aeb388502a34ca6ad6b5beeb7098856>

Technical Blog (Medium)

- **Health Insurance Cost Prediction: From Data to a Deployed ML App**
<https://medium.com/@samarescv/health-insurance-cost-prediction-from-data-to-a-deployed-ml-app-0e89e433a8ed>

Data Science Portfolio (Optional)

- **Project Showcase Page**
<https://www.datascienceportfol.io/samarescv/projects/1>

Tools & Technologies Used

- **Python** (Pandas, NumPy, Scikit-learn)
- **Machine Learning** (Regression Models)
- **Tableau Public** (Interactive Dashboards)
- **GitHub** (Version Control & Collaboration)
- **Loom** (Project Presentation)
- **Medium** (Technical Documentation)

Key Outcomes

- Identified major **risk factors affecting insurance premiums**
- Built **interactive Tableau dashboards** for business insights
- Developed and documented an **ML-based cost prediction model**
- Communicated results through **visual storytelling and technical writing**

Contact

For feedback, collaboration, or opportunities, feel free to reach out via GitHub or LinkedIn.