Length of Stay Predictor

virtusa

Deep Learning solution that predicts patient hospital stay

Why Virtusa?

- Using technology innovation as a differentiator.
- Proven methodologies and best practices.
- Connecting payers, providers, and patients.
- Eliminating technical debt and becoming an agile organization.
- Application modernization and cloud migration.
- Embracing data and analytics as tools for survival.

Additional resources

- Request prediction model
- Product overview video
- Download brochure

Product overview

Effective scheduling for hospital admission is a major challenge as uncertainty in a patient's length of stay and errors in estimations can lead to capacity pressures. To tackle this, Virtusa-GCTS has developed a Deep Learning-based solution which will accurately predict how long a new patient will stay in the hospital. The model uses cutting edge regression algorithms. It not only helps hospitals to plan and deploy their resources effectively but also assists insurance companies with fraud prevention.

Product features

Leveraging patient data
Uses patient clinical history with flags for asthma, renal diseases, and other vital information such as body mass index (BMI), pulse, and more.

Fraud prevention
Helps insurance companies to plan their indemnities and assist in preventing fraud.

Innovation as a service
Enable integration opportunities with partner solutions across the healthcare and life sciences sectors.

Differentiators

- Digital healthcare IT solutions and outsourcing services that meet competitive, regulatory, financial, and customer service requirements.
- Personalized healthcare experience at 10x speed.
- Care cohort management that focuses on successful value-based care by delivering accurate patient information.

Model input and output details

Input

Virtusa's Length of Stay Predictor provides patient clinical history with flags for asthma and renal diseases, along with psychological conditions and history. Patient vital information such as BMI, pulse, and respiration are recorded at the time of hospital admission and used to predict the length of stay.

Input MIME type
text/csv

Sample input data
view data
Input data descriptions

Output

This model will predict number of days that a patient can stay in the hospital and returns output as .csv files.

Output MIME type
text/csv

Sample output data
view data
Output data descriptions

Sample notebook

- Sample notebook link
- Get repository link

Discover more

- Artificial Intelligence in Virtusa

Solution available in AWS Marketplace