



VERSONIX SEAWARE

THE ULTIMATE RESERVATION SYSTEM

Using Artificial Intelligence for Pricing and Forecasting decisions

Ferry Shipping Summit 2019

- Established in 1986
- Located in San Jose, California
- Corporation profitable since inception
- Diverse staff of 65+ professionals around the world
- Market demographic – Reservation system for leisure travel and transportation markets



Our Customers

TALLINK SILJA LINE



CORSICA linea
« Laissez vous transporter »



Atlantis



WINDSTAR
CRUISES



Haven

Butlin's

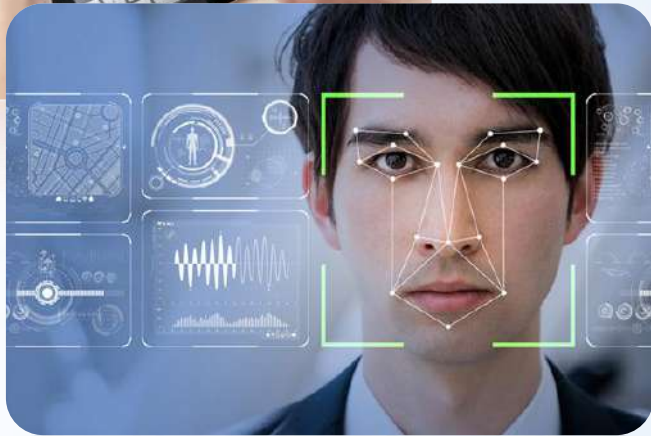
Warner Leisure Hotels
JUST FOR GROWN-UPS



AMERICAN QUEEN™
STEAMBOAT COMPANY



The process actually involves nothing more than **programming computers** in a **new way** using huge amounts of data to train them, so they can carry out certain tasks that humans normally do, but other software and technologies don't



- Google Search
- Facebook or Apple photo recognition
- Spam filter
- Google Home
- Alexa



Find pattern in what appears to be completely random data

- Self improving algorithm that defines relationship between data elements
- Example 1: Google translate first version was in 2006. It's learning by itself and is getting better and better. and it gets better and better with times. It's learning ...
- Example 2: Google Lens (image recognition)

...overcome the challenges



Challenges and specifics of cruise/ferry industry

- Many variables (weather, competition, state of economy, etc.)
- Historical Data becomes outdated due to changing situation
- Scarcity of data

...the transition



- Transition from Rules to AI for Pricing and Forecasting
- Introduce Inventory Unit Value and Unit Value Price
- Introduce Expected Passenger Additional Revenue component
- Use Reinforcement Learning for Pricing and Forecasting

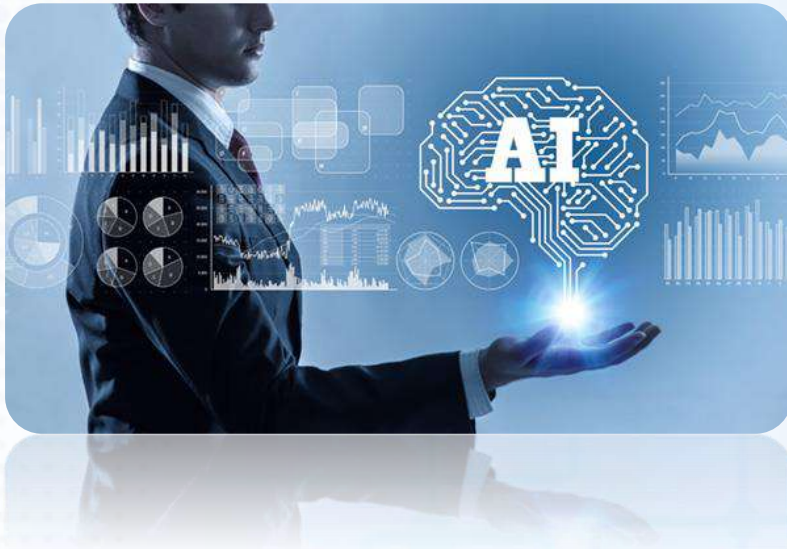
...the application



Air pricing

- Optimal pricing for a major airfare's component is developed.
- The system has 2 parts: *monitoring client response* (client willingness to pay the quoted price) and *adjusting component price* based on client response. Pricing system is made non-deterministic in order to be more robust and degree of randomness is set by a user.

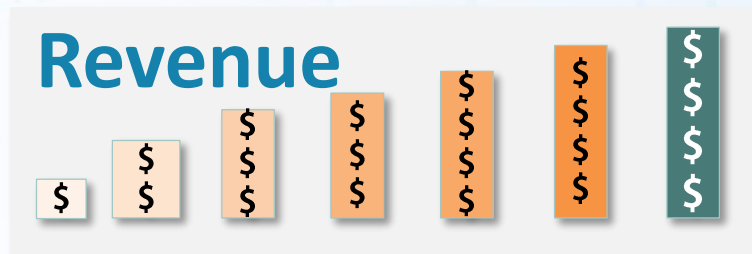
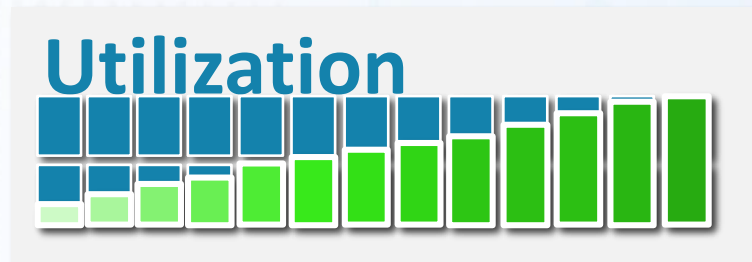
...forecasts and relationships



- Forecast is made based on the booking curves
- Forecast estimates are made on a regular basis for all departures
- System finds relationships between various departures and makes appropriate adjustments

...what's the best price for a product or service?

- With AI, price trends can be correlated with sales trends through an algorithm that aligns other factors, such as category management and inventory levels
- The establishment of dynamic prices driven by AI will mean higher profit margins for companies



...nobody is left behind



- **Don't worry** AI will not replace humans but it is a tool help them to perform more efficiently tedious tasks and focus on strategic and creative activities
- **Be aware** that the challenge will be discovering how humans can team up with artificial intelligence to release its full strategic and creative potential

Thank you!