Actualize Partners

Perceiver

Perceiver (tm) is a unique platform for generating models and algorithms with a focus on data mining.

Contents

Description

Perceiver (tm) is a unique platform for generating models and algorithms with a focus on data mining. The product solves optimization problems based on the data provided; with unlimited applications. Perceiver constructs a variety of algorithms or mathematical models that achieve the level of fitness you require through a Darwinian model (evolution). The important thing is that the product finds relationships between the different examples given and then builds the optimal model depending on configuration; far exceeding what is possible by an expert team in data mining, artificial intelligence, or data science.

Perceiver is automatic and tireless, and most importantly, makes no assumptions. The product builds or configures the model that best relates to information provided by the data; achieving in the process the desired fitness level. Because it generates computer programs as output, Perceiver gives you the opportunity to build complex software projects using the code provided. It also enables you to immediately develop intelligent hardware devices.

Problem

Despite Huge AI Advancements...
It Still Gives Us Suboptimal Guidance Every Day in Every Industry

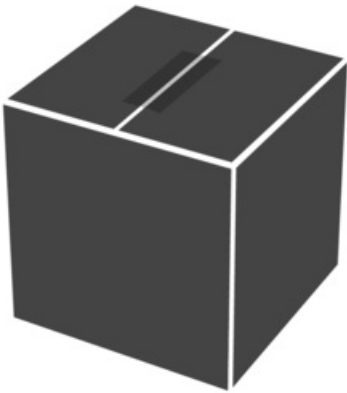A recent survey suggests that **68%** of organizations have room for **improvement** in their decision making.

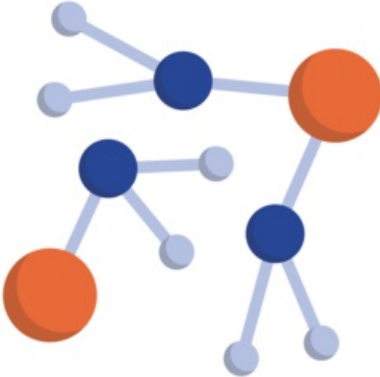**68%**

Problem

Despite Huge AI Advancements...

Leading AI products are a **black box** which is not acceptable for applications where you must understand the *"thought process"* such as portfolio management, route planning, and healthcare.

Problem

Despite Huge AI Advancements...

AI has **reproducibility issues** where outcomes are not consistently replicated or understood.

Problem

Despite Huge AI Advancements...

The **world is ruled by algorithms** and current ML requires humans to discover and test models which introduces their **biases**, **blind spots**, and **slow pace** compared to a machine.

Enter **Perceiver** ™
The Premier Optimization AI

- Perceiver is a **machine learning based optimizer**.

- It generates **algorithms and predictive models** as the result of optimizing against a training dataset.

- Output is **immediately inspectable and usable**.

- Can use an **existing algorithm as the starting point**.

- Has produced **superior performance** across very different domains.

Perceiver ™
Works Out of the Box

- Requires **minimal human intervention**. **Eliminates the need for a data scientist** to pre-analyze how the data behaves.

- Uses a **novel form of genetic programming**.

- Makes **no assumptions**. It only uses **observed data patterns** to determine the optimal model.

Perceiver ™
Is scalable and has a multitude of applications

- Built for **large datasets** using distributed programming principles.

- **Not limited to pre-existing models**. Perceiver creates complex models using intelligent cross-dataset relationship analysis.

Perceiver ™
Has a Wide Array of Applications Across Many Domains

Logistics

▶ Airline fuel tankering

▶ Fleet optimization

Financial Services

▶ Investment signal generation

▶ Early identification of defaults

▶ More accurate credit rating

As Alums of Some Very Tech Savvy Organizations, We Are Passionate About Getting AI Right

Howie Altman
CEO

- **20 years** experience across multiple industries.
- Managing Partner of **Actualize**.
- **Bridgewater Associates, Hello Alfred, Axial, Bonobos, Scouted, Semsee**.
- Computer Science degree from the **University of Illinois at Urbana-Champaign**.

José Bonetti
COO

- **15 years** experience across multiple industries.
- Partner of **Actualize**.
- Founder of **GBH**, a unique 70 person product development company.
- Master's in Software Engineering from **Carnegie Mellon**.

As Alums of Some Very Tech Savvy Organizations, We Are Passionate About Getting AI Right

Milton Hernández
CTO

- **25 years** experience across multiple industries.
- Partner of **Actualize**.
- **Google, Bridgewater Associates, Axial**.
- ML and optimization expert.
- Computer Science degree from the **Instituto Tecnológico de Santo Domingo**.

Ed Bendy
CPO

- **25 years** experience across multiple industries.
- **Razorfish, Travelocity, Plusgrade, Semsee**.
- BS from **Stanford**, MBA from **Kellogg**.
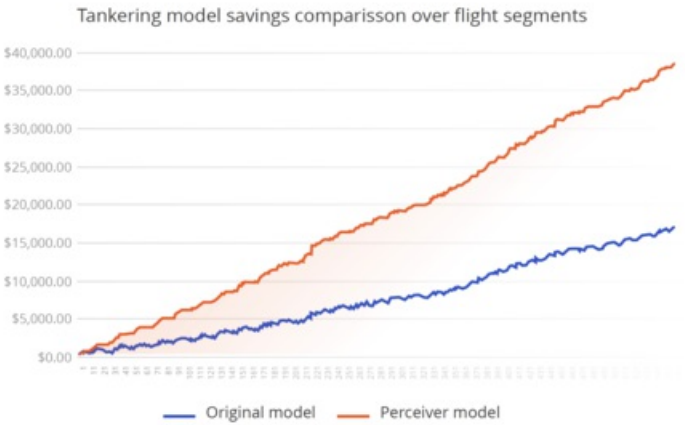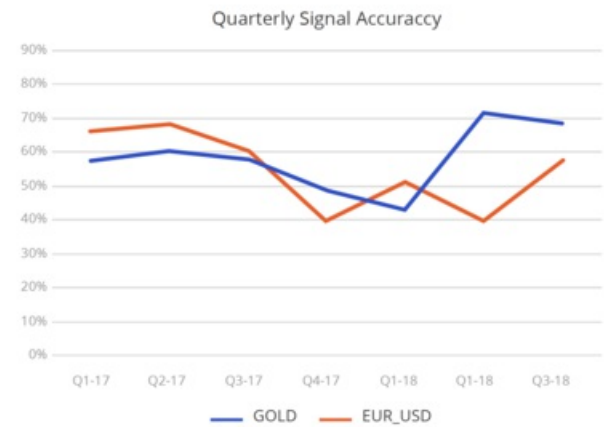
Fuel Tankering
Case Study

ⓘ Fuel accounts for 40% of an airline's operating costs.

▶ For a publicly traded commercial airline, Perceiver produced **130% savings** against their existing fuel tankering model for flights departing from only one hub! Projected USD $6.5 MM savings nationwide in a year.

Tankering model savings comparisson over flight segments

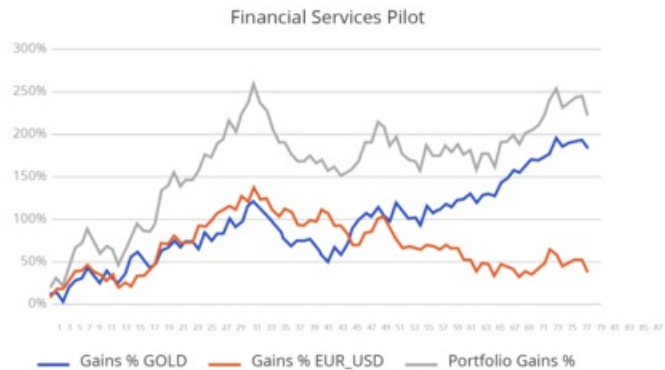Legend: — Original model — Perceiver model

Investment Signal Generation
Case Study

▶ In an 22 month trial using the EUR/USD currency pair and gold futures, Perceiver **produced greater than 53.98% average signal strength**.

Quarterly Signal Accuraccy

Legend: — GOLD — EUR_USD

Investment Signal Generation
Case Study

▶ And **over 200% cumulative returns**.

Financial Services Pilot

Legend: — Gains % GOLD — Gains % EUR_USD — Portfolio Gains %

We Want To Work Together

We're looking for select domain experts in logistics and financial services to join this exciting journey with us!

Howie Altman

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