

# Agenda

- My Fave AI App
- Definitions
- History
- Mechanics
- State of the Art
- Ethics
- The Future



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# August 2016

## Option 1 - Interactive Trivia Quiz Challenge Game

Inspired by [quizup](#) but a PWA rather than a native app and used as a way to illustrate backend design principles. We'll build this app in steps and highlight important lessons as they arise in the design process.

### Requirements

- Usage flow
  - Visit site ([quizr.io](#))
  - Anonymous mode works out of the box
    - Ability to do quiz challenges with random other users but no user profile, no persistence of results, no leaderboard, no history
  - Establish a user profile
  - Challenge random or selected opponent to real time trivia challenge
  - Challenger selects subject, responder accepts or rejects (repeat until agreement)
  - Quiz conducted in real time using webRTC data (with optional video)
  - Results are persistent
  - Leaderboards maintained
  - Questions are accessed dynamically via network (caching is not particularly helpful because real time contents won't work while offline)
- Utilize an [open trivia question database](#)
- Implemented as a PWA
- Both a hosted service and an open source code example
- FE uses either react or Angular 2 (TBD)
- Use to illustrate state of the art back end capabilities

### App Stages

1. FE - UI starts with anonymous mode only.
2. Add successive features by implementing an API (REST or gRPC). With each step, highlight options and considerations in choosing backend technology
  - a. sign in and user profile management

# Definitions

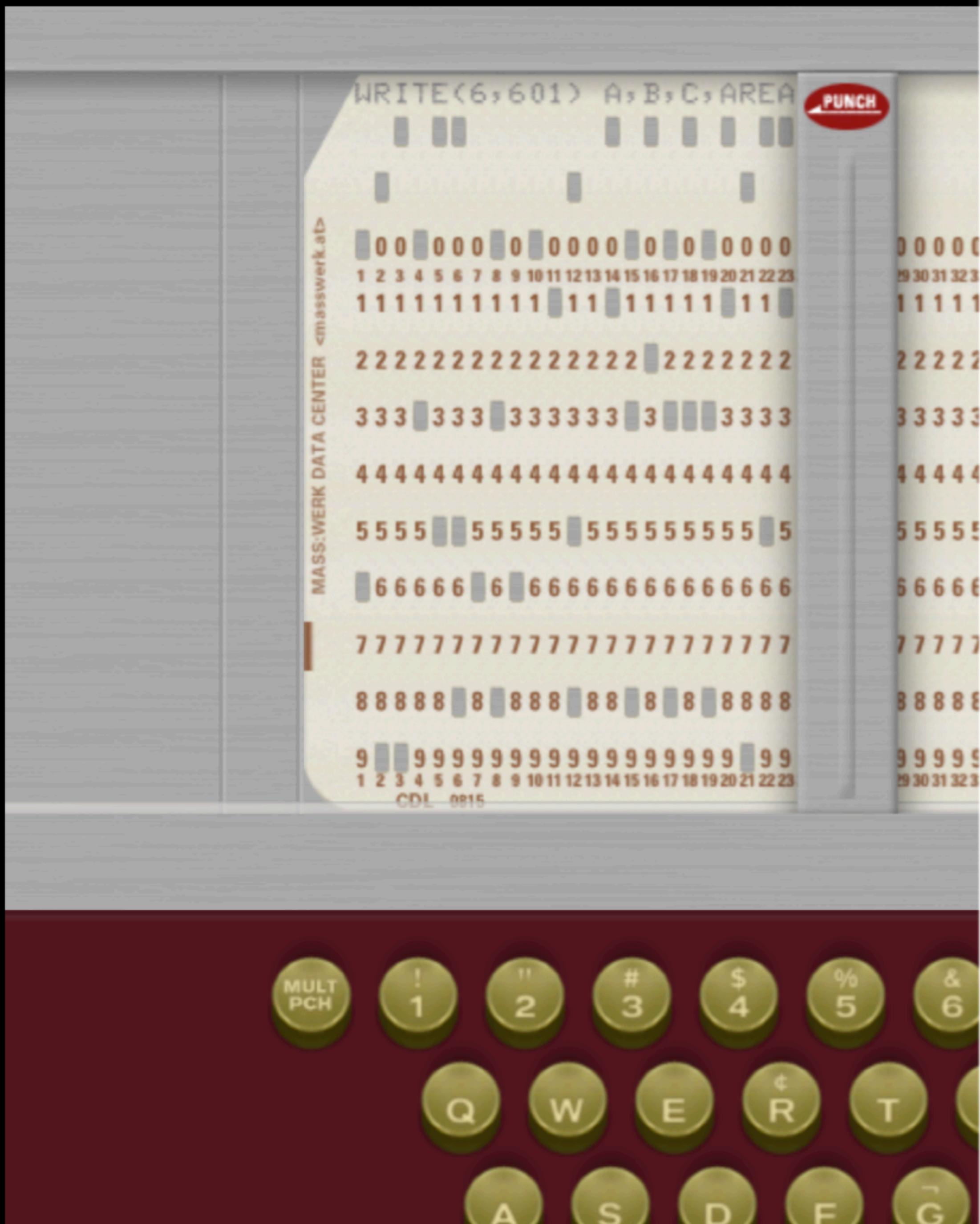
- Artificial Intelligence
- Machine Learning
- Neural Network
- Deep Learning
- Generative AI

Photo by [Stefan](#) on [Unsplash](#)

# History

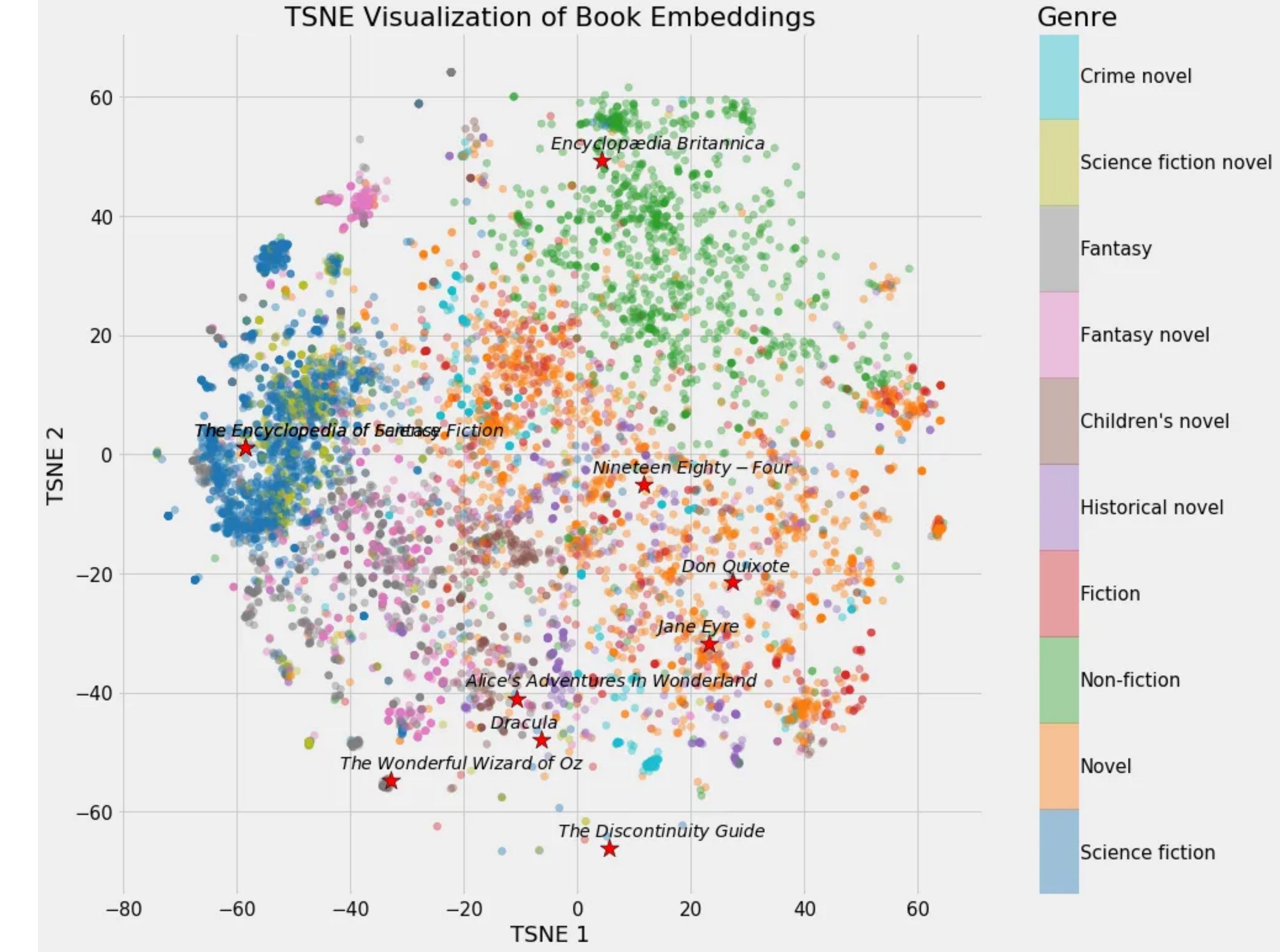
## How did we get here?

- Founders
- Timeline

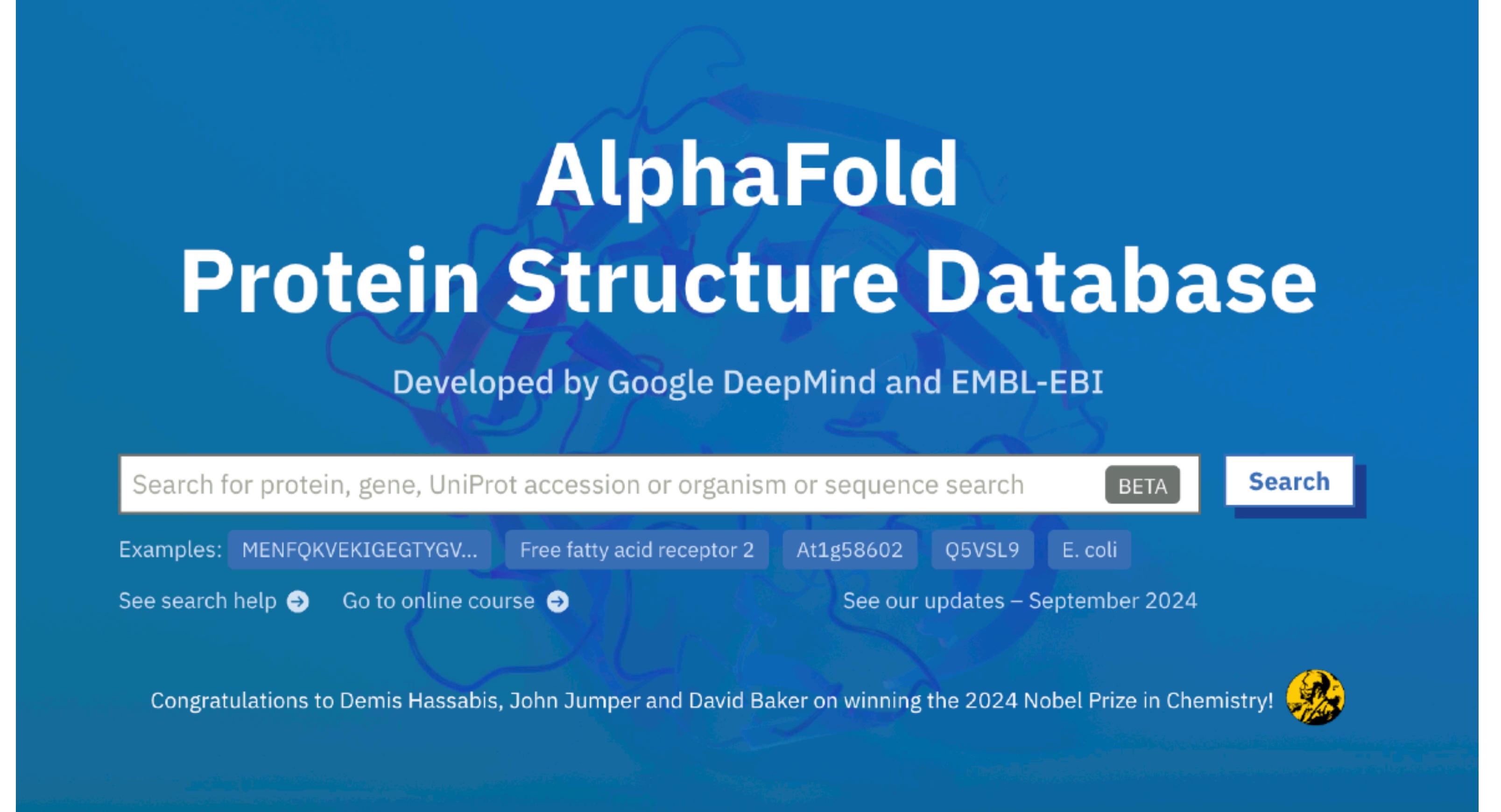


# Mechanics

How does AI work?



# State of the Art



The image shows the homepage of the AlphaFold Protein Structure Database. The background features a blue gradient with faint, translucent protein structures. The title "AlphaFold Protein Structure Database" is prominently displayed in large white font. Below the title, it says "Developed by Google DeepMind and EMBL-EBI". A search bar at the top allows users to "Search for protein, gene, UniProt accession or organism or sequence search". A "BETA" button is visible next to the search bar. Below the search bar, there are examples of search terms: "MENFQKVEKIGEGTYGV...", "Free fatty acid receptor 2", "At1g58602", "Q5VSL9", and "E. coli". Links for "See search help" and "Go to online course" are also present. A note about the 2024 Nobel Prize in Chemistry is displayed, along with a small portrait of Demis Hassabis. The bottom section of the page has a light blue background and contains the text: "AlphaFold DB provides open access to over 200 million protein structure predictions to accelerate scientific research."

# AlphaFold Protein Structure Database

Developed by Google DeepMind and EMBL-EBI

Search for protein, gene, UniProt accession or organism or sequence search BETA Search

Examples: MENFQKVEKIGEGTYGV... Free fatty acid receptor 2 At1g58602 Q5VSL9 E. coli

See search help  Go to online course 

See our updates – September 2024

Congratulations to Demis Hassabis, John Jumper and David Baker on winning the 2024 Nobel Prize in Chemistry! 

AlphaFold DB provides open access to over 200 million protein structure predictions to accelerate scientific research.

# Ethics

## Using AI Safely



# The Future

## Where is all this going?



Photo by [Mathilda Khoo](#) on [Unsplash](#)