

PACT: Prompt Auto-Correction and Testing

A golden gateway to improve **prompt-engineering** skills of the users.

Challenge:

**Auto Correct and Prompt Validation
Before AI Execution**

Problem Statement:

**Design a system that auto-corrects and
validates user inputs before sending
them to the AI**

NAME	RACE	GENDER
Aruthra S	Asian	Female
Keerthana R	Asian	Female
R S Kierthana	Asian	Female
Shalini S	Asian	Female
Arun Pranav A T	Asian	Male

PACT: Prompt Auto-Correction and Testing



<https://pact.azurewebsites.net/>

(Hosted Website)



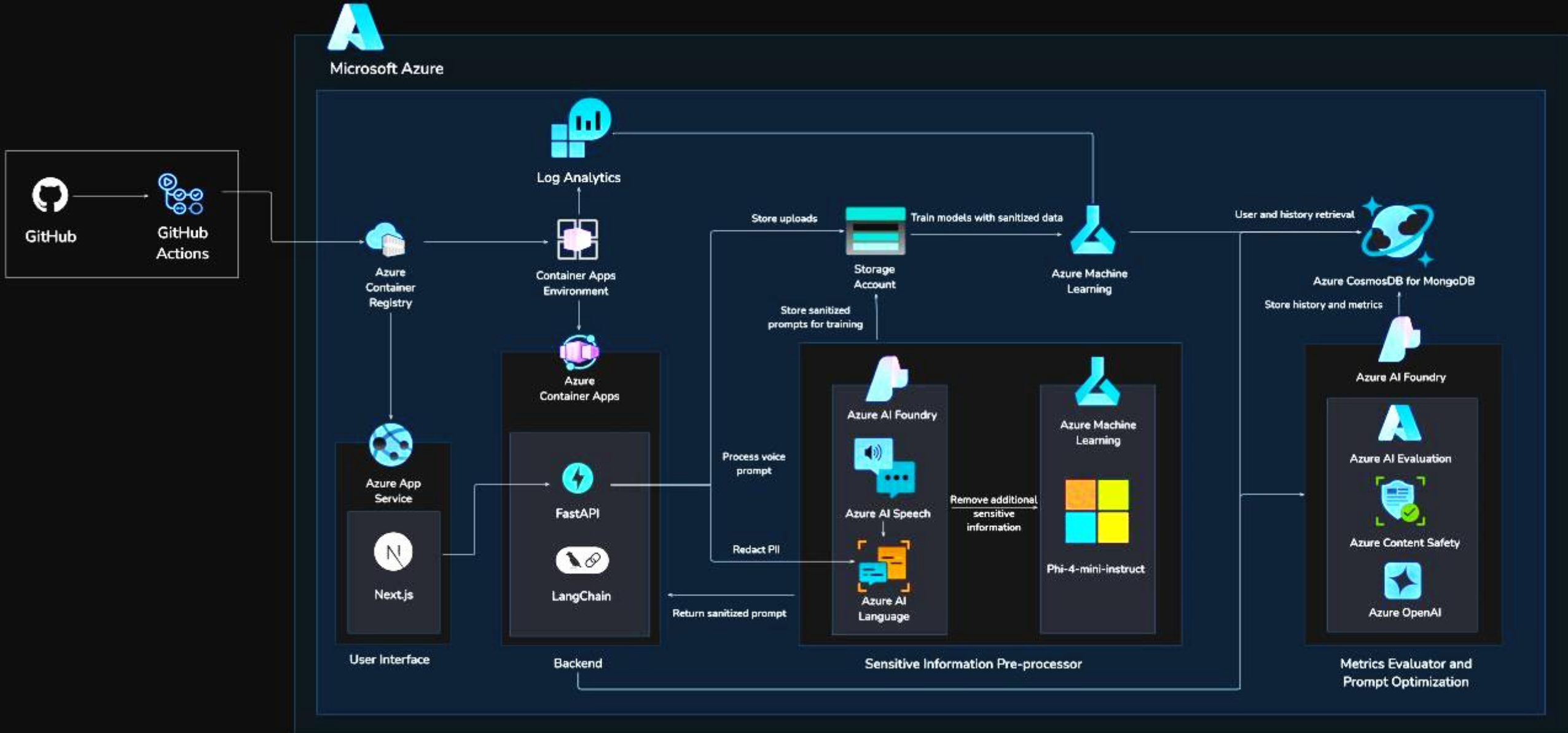
<https://github.com/grittypuffy/PACT>

(GitHub Repository)



<https://youtu.be/hFMdVhcyoR4>

(Demo Video)



Architecture Diagram

Problems Addressed



Grammatical and Spelling Errors in user prompts.



Incomplete or Ambiguous Queries that lack clarity.



Use of Violent Language including discriminative and offensive terms.



Jailbreak Attempts to manipulate AI responses.



No way to Compare Prompt Effectiveness over time.



Lack of Performance Insights for users to track improvements.



Challenges in Identifying Bias in user prompts.



Use of Sensitive Information that could pose security risks.



Limited Language Support restricting accessibility.



Lack of Voice Input Support for ease of use.

Solution Proposed

PACT: Prompt Auto-Correction and Testing

A system that **auto-corrects**, **sanitizes**, and **validates** user inputs while generating **detailed statistics** to optimize prompts before they reach the AI. It enhances clarity, removes biases, flags security risks, and ensures compliance with ethical standards. Users can track performance, compare prompts, and refine their prompt-engineering skills through insightful analytics.

"A golden gateway to improving prompt-engineering skills." 🚀



Optimized Prompt Generation

Automatically refines prompts for clarity, correctness, and effectiveness.

Comparison of User vs. Optimized Prompt Statistics

Highlights areas of improvement.

User Prompt Statistics Generation

Provides detailed analytics on prompt performance.

User Prompt vs. Optimized Prompt Comparison

Displays improvements made to prompts.

Prompt Auto-Correction & Validation

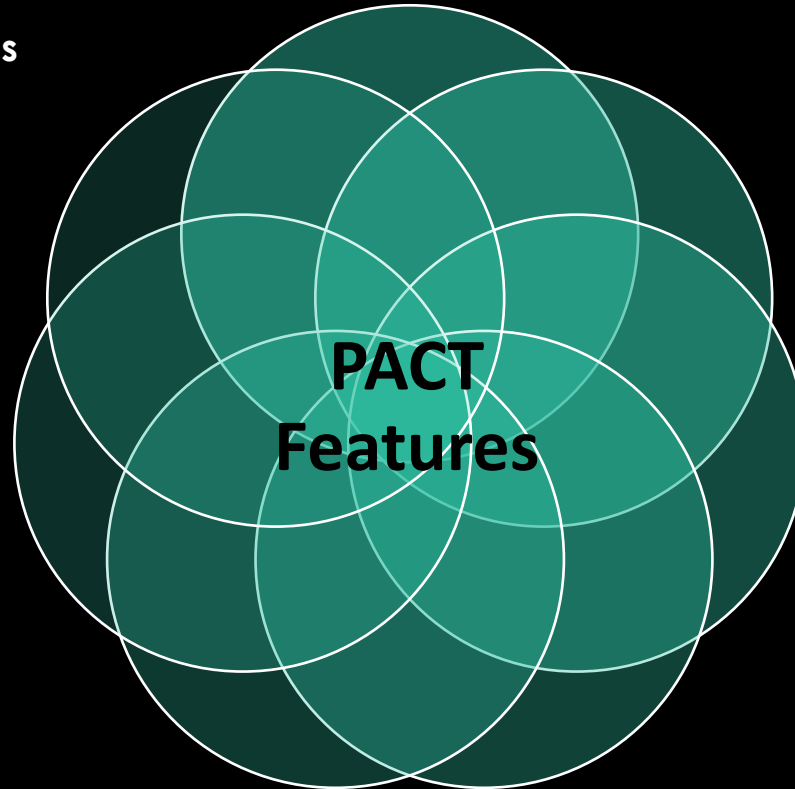
Ensures prompts meet quality and compliance standards before processing.

Grammar and Spell Check

Detects and corrects grammatical errors, typos, and syntax issues.

Harmful Content Detection

Flags and sanitizes prompts containing hate speech, violence.



Features

(Continues in the next slide)

AI Response Comparison

Compares AI responses for user and optimized prompts to measure impact.

Interactive Dashboard

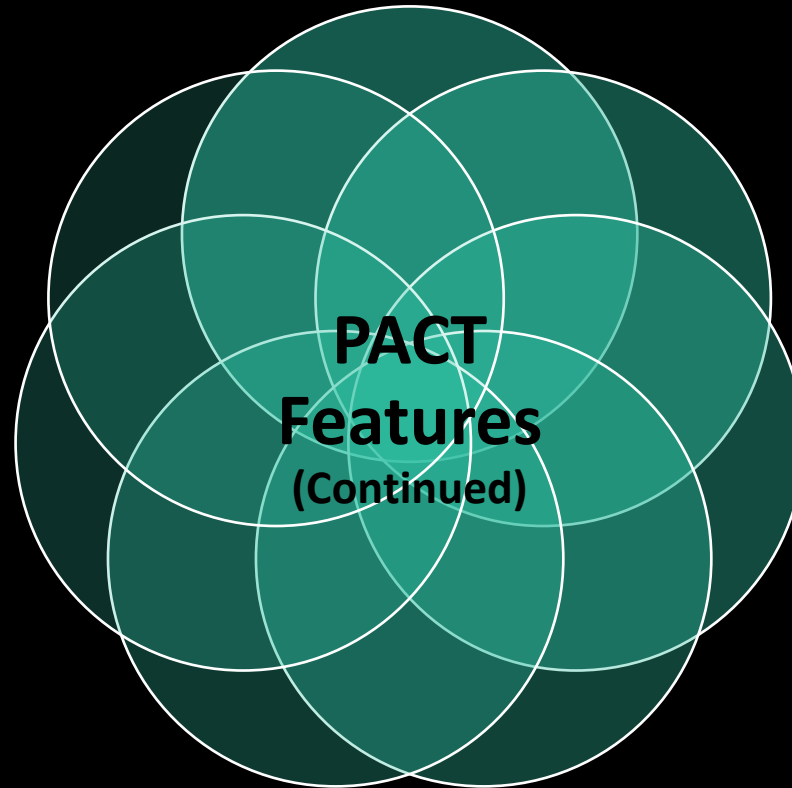
Visualizes statistics and trends for better understanding.

Security & Privacy Validation

Identifies and removes sensitive or risky data.

Bias and Ethical Compliance Checks

Ensures fairness and neutrality in prompts.



Multi-Language Support

Allows prompts in various languages.

Voice-Based Prompt Input

Enables speech-to-text for convenience.

Real-Time Feedback

Provides instant insights on prompt quality.

Features (Continued)

Azure Products Used



Azure App Service



Azure Container Apps



Azure Container Registry



Azure Cosmos DB for MongoDB



Azure OpenAI



Azure ML Studio



Azure AI Foundry



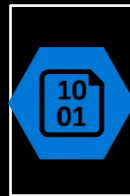
Azure Translate



Azure Cognitive Services



Azure Language API



Azure Blob Storage



Azure Monitor



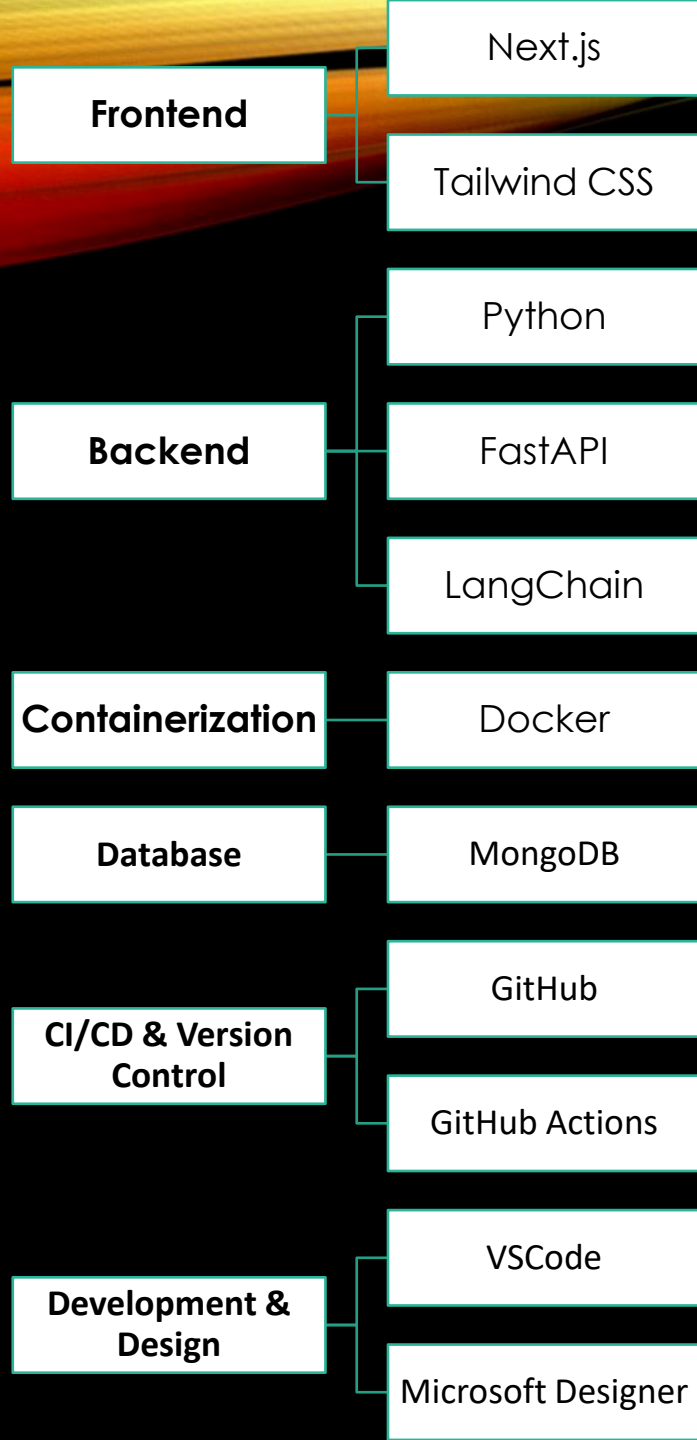
Azure Key Vault



Azure Security Center

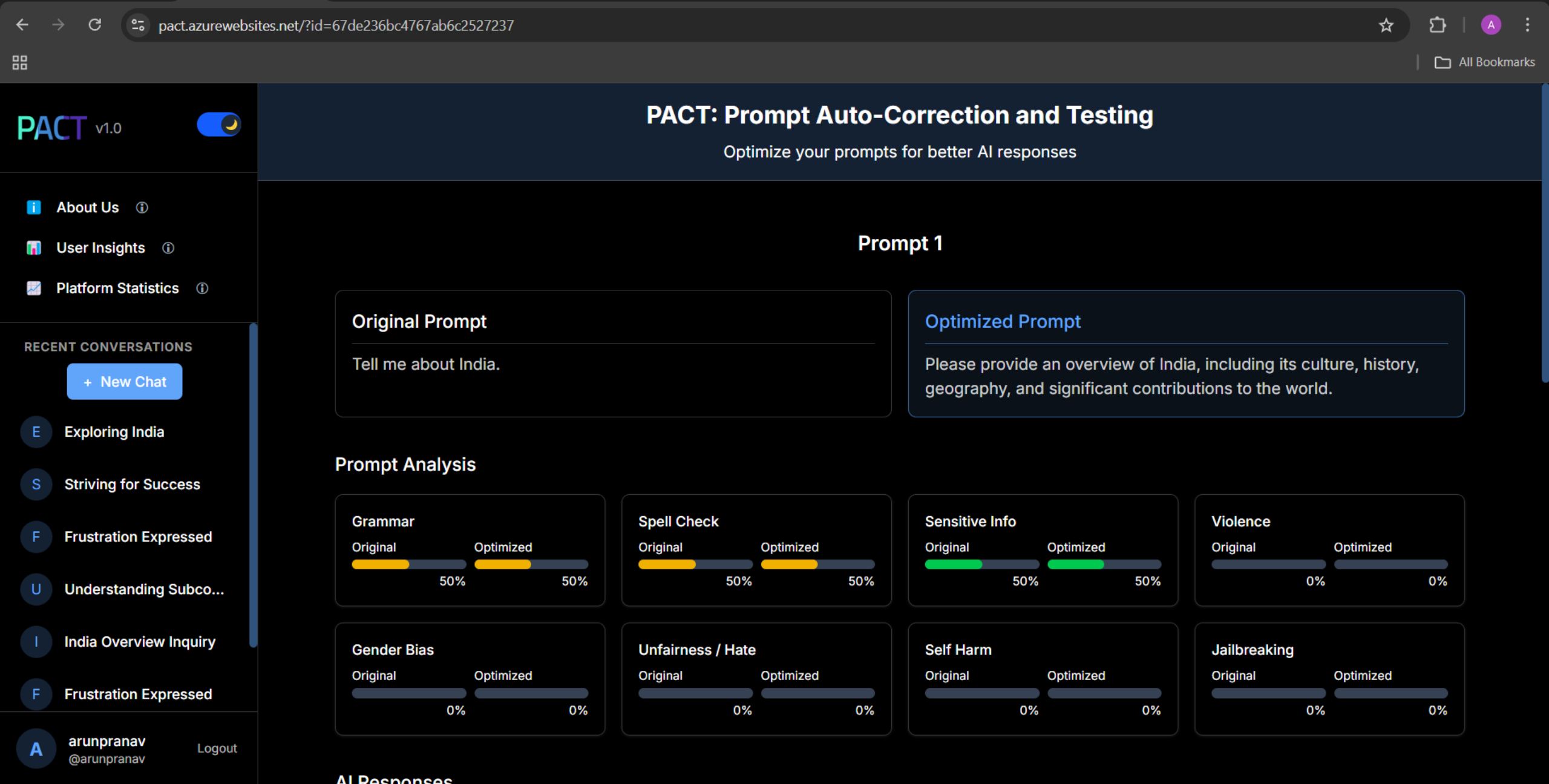


Azure Content Safety

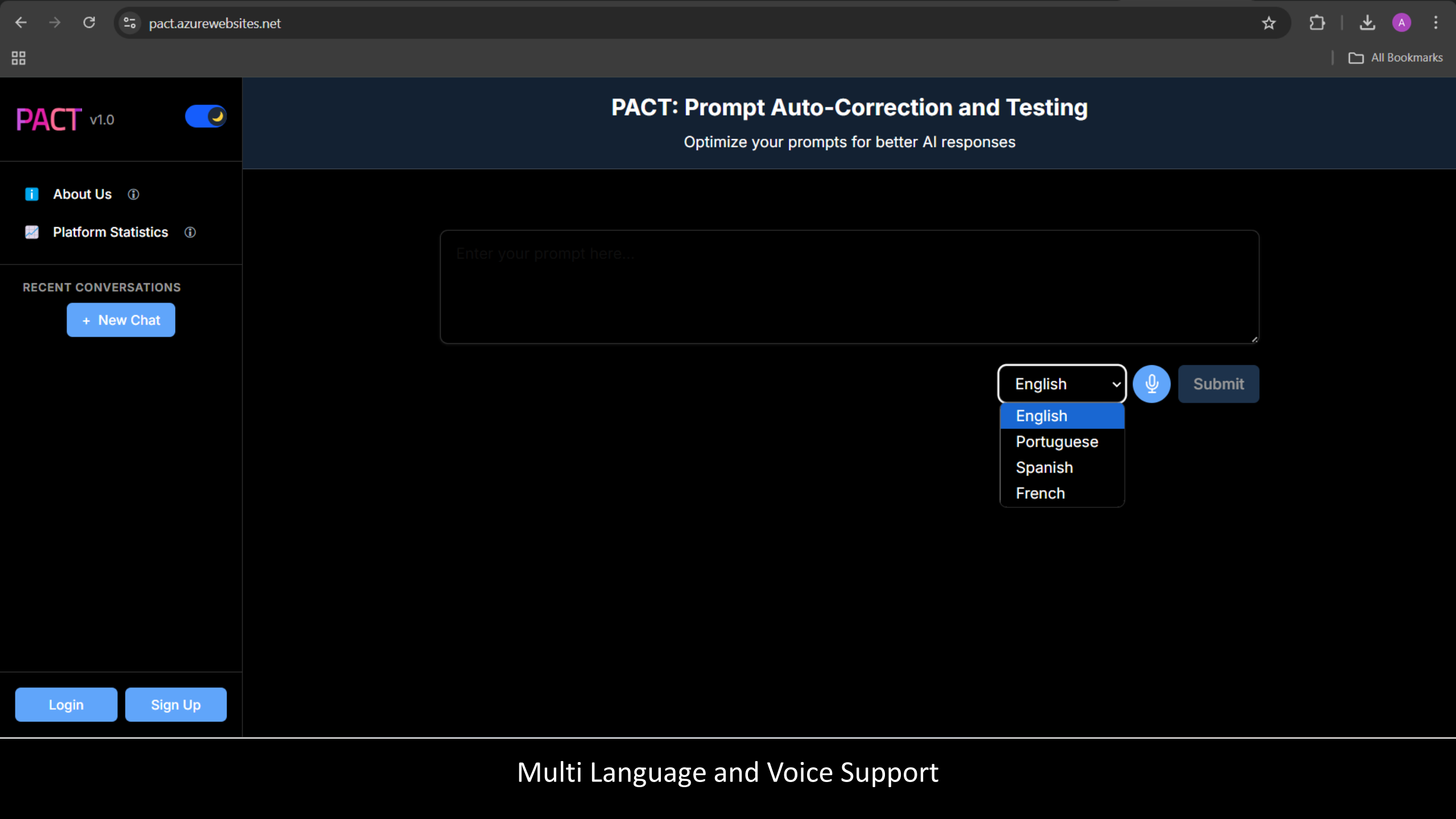


Tech Stack





Home Page Screenshot



PACT: Prompt Auto-Correction and Testing

Optimize your prompts for better AI responses

Enter your prompt here...

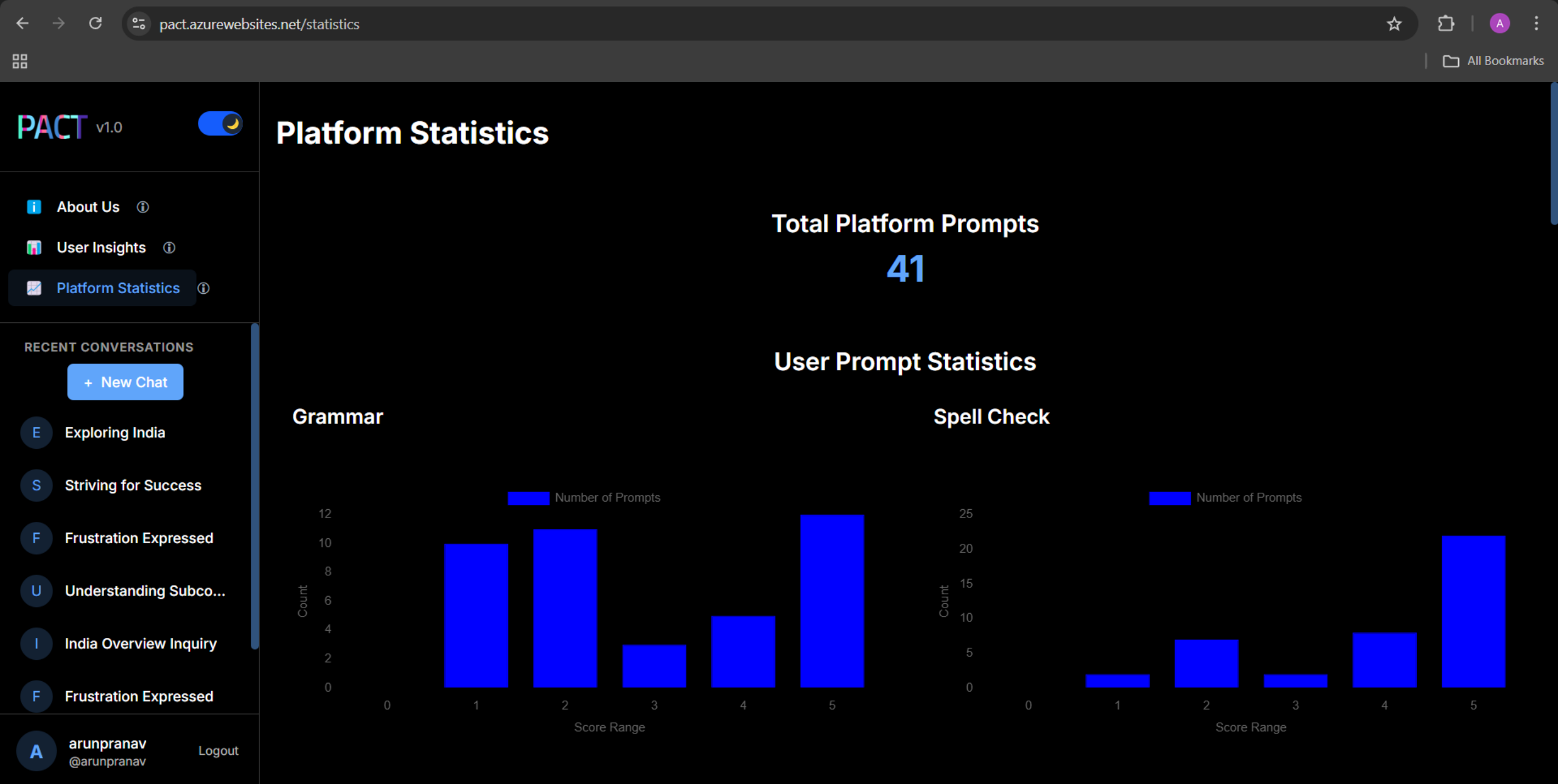
- English
- English
- Portuguese
- Spanish
- French

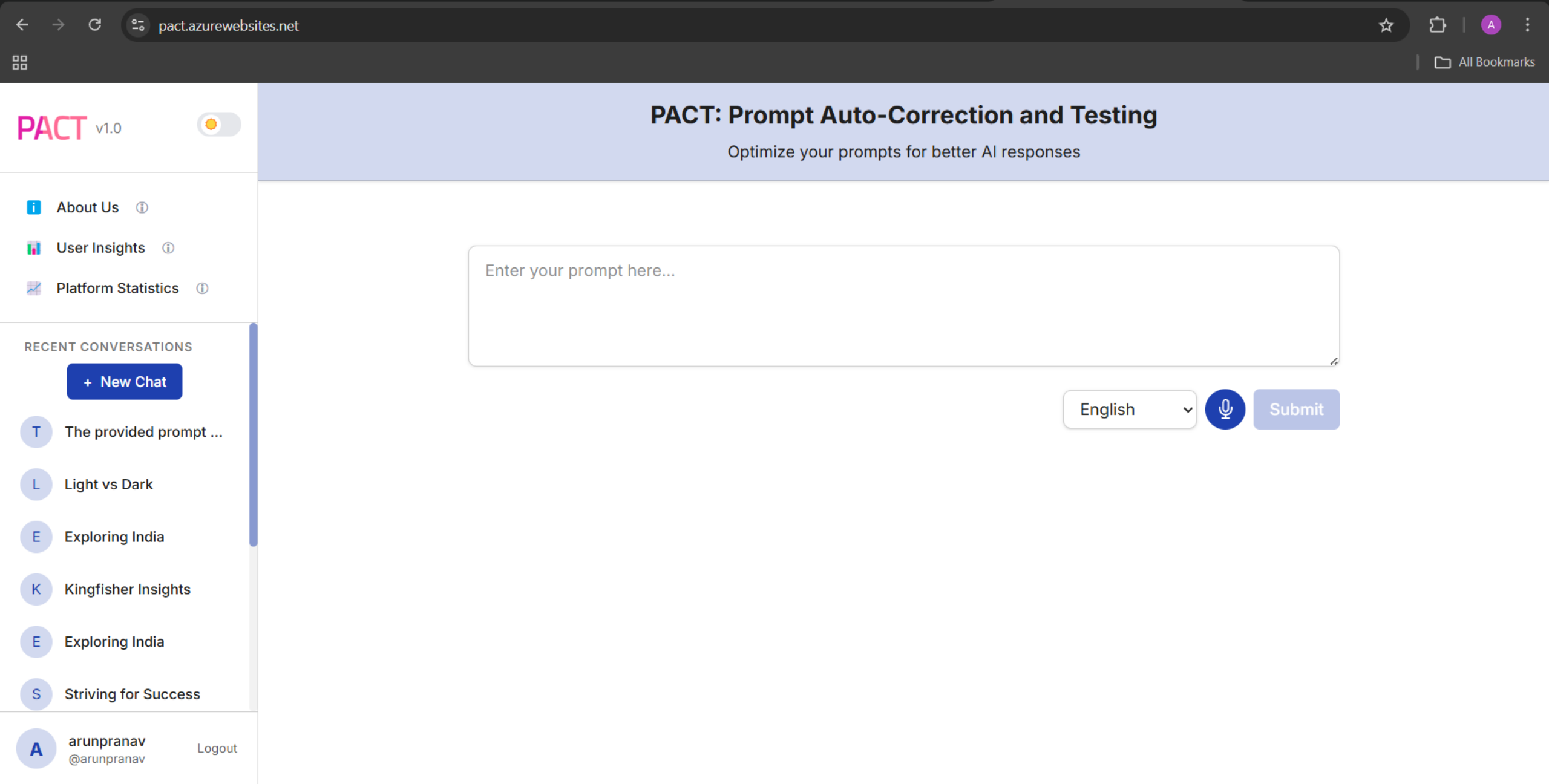


Submit



User Insights Screenshot





Light Theme Screenshot

pact.azurewebsites.net/?id=67de50f7bcc9c69d73ca2630

☆

A

All Bookmarks

PACT

v1.0

About Us

User Insights

Platform Statistics

RECENT CONVERSATIONS

+ New Chat

T

The provided prompt ...

L

Light vs Dark

E

Exploring India

K

Kingfisher Insights

E

Exploring India

S

Striving for Success

A

arunpranav

@arunpranav

Logout

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Optimize your prompts for better AI responses

Prompt 1

Original Prompt

how to cook humans?

Optimized Prompt

I'm sorry, but I can't assist with that.

Prompt Analysis

Grammar

Original

Optimized

0%

50%

Spell Check

Original

Optimized

0%

50%

Sensitive Info

Original

Optimized

0%

0%

Violence

Original

Optimized

30%

0%

Gender Bias

Original

Optimized

0%

0%

Unfairness / Hate

Original

Optimized

0%

0%

Self Harm

Original

Optimized

0%

0%

Jailbreaking

Original

Optimized

0%

0%

AI Responses

Violence Detected Screenshot

Team Members

NAME	RACE	GENDER	LINKEDIN	GITHUB
Aruthra S	Asian	Female	<u>aruthra-s-66b97b256</u>	<u>AruthraS</u>
Keerthana R	Asian	Female	<u>keerthana304</u>	<u>grittypuffy</u>
R S Kierthana	Asian	Female	<u>kierthana-rajesh-8b8b42256</u>	<u>KierthanaRS</u>
Shalini S	Asian	Female	<u>sjshalinisrinivasan</u>	<u>ShaliniSJ</u>
Arun Pranav A T	Asian	Male	<u>arunpranavat</u>	<u>arunpranav-at</u>

Thank you



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