CopyScience

iPullRank's Natural Language Generation platform

On the back of the popularity and explosion of language models, we are building a Natural Language Generation (NLG) platform focused on the SEO and Social Media Marketing communities. Our goal is to make NLG easy and accessible to everyone from within applications they normally use and given more people the ability to scale utility content creation.

There has also been an explosion of tools that allow SEOs to learn from SERPS and make suggestions on keyword, proof term, and entity usage as the user edits their content. We want to bridge the gap between these two tool sets, make improvements and add automation.

Our Unique Features

While there have been several tools that have popped up in the marketplace since we started this project such as CopyAI and SnazzyAI, there are a series of unique features that we have that have not been presented in the marketplace yet.

- **Copy Generation based on SERPS for a target keyword -** We want a user to enter a keyword then the tool crawls the top 100 results in Google to extract features, fine tune a language model, and generate copy that aligns with the aspects required for the content to perform in Organic Search.
- **Generate Tweets in your voice based on a list of URLs -** We want the user to upload their complete Twitter archive to finetune a model. Then we want the user to have the capability to upload a list of URLs. Using abstractive summarization with the fine-tuned model, we'd generate tweets in the user's voice.
- **Generate Video transcripts with automated internal linking structure -** We want the user to provide links to videos and generate transcripts with internal links added automatically either based on data from Semrush, entity relationships determined through crawling the site, or keyword vs URL pairings that they identify.
- **Automatic optimization of content based on what ranks -** We want to automatically optimize components of existing content based on what is currently ranking. Effectively, this is the same as the copy generation based on the SERPs as above, except there is existing content that would need to be compared against what is learned by fine-tuning from the SERP. We'd like for this to be applied to:
    - Page titles
    - Meta descriptions
    - Body copy
- **FAQ & Glossary Generation -** We want to automatically generate FAQ pages and glossary pages based on a set of keywords. Again similar to the above, but a specific type of pages that are also marked up with schema.org code once generated. Similar to

this post:
https://www.searchenginejournal.com/generate-quality-faqs-faqpage-schemas-with-python/380004/

- **Content Ideation tool -** Ingesting data from Twitter and by scraping the SERPs, we want to be able to generate content ideas based on what is currently trending.
- **Generate Page Titles & Meta Descriptions -** Users will be able to generate meta descriptions based on text generated or URLs given similar to this post -
- **Structured Data to Text -** Users will be able to generate paragraphs from structured data somewhat similar to this post - https://www.searchenginejournal.com/generate-data-driven-copy-ecommerce-category-pages-gpt-2/375277/

We also water the user to be able to use these features in their native environments rather than just in the tool. For instance, we'd like to have a browser extension that allows users to bookmark URLs to auto-tweet in their voice. The content optimization tools should be usable within Word and Google Docs.

Features We're Adopting

Copy.ai & Snazzy.ai

For our product to get broad scale adoption, we need to fulfill use cases that have already been tackled by notable tools in the space such as Copy.ai and Snazzy.ai. Both of these tools support use cases for the rapid creation of copy in support for social media, e-commerce, landing pages and advertising. We need to quickly achieve feature parity with these tools to compete.

What can you create with CopyAI?

Digital Ad Copy
- Facebook Ads
- Google Ads
- Linkedin Ads

Social Media Content
- Captions
- Instagram Posts
- Brainstorm Topics

Website Copy
- Hero Text
- Subheaders
- Meta Descriptions

eCommerce Copy
- Product Descriptions
- Product Benefits
- Microcopy

Blog Content
- Ideas
- Intros
- Lists

Sales Copy
- Pain-Agitate-Solution
- Before-After-Bridge
- Attention-Interest-Desire-Action

Snazzy AI

Explore our templates

Google Ads
Create Google Ads from scratch with exact requirements and layout required for use.

Explore Now ❯

Taglines
What's better than a catchy brand slogan? Not much. Create a new tagline in seconds.

Explore Now ❯

Landing Pages
Reimagine your landing page with limitless variations of new or existing copy.

Explore Now ❯

Product Descriptions
Generate product descriptions based off a set of descriptive tags.

Explore Now ❯

ClickFlow

ClickFlow is representative of the tools in the SEO space that are primarily reviewing content across the features of other content and giving the user feedback about the aspects of the content that they should be adding to better appeal to search engine algorithms.

It's editor is quite interesting in that it does an effective job of extracting content from the page while others may falter in this area due to how pages are structured. We'd like to take this a bit further by making it a WYSIWYG editor similar to Optimizely.
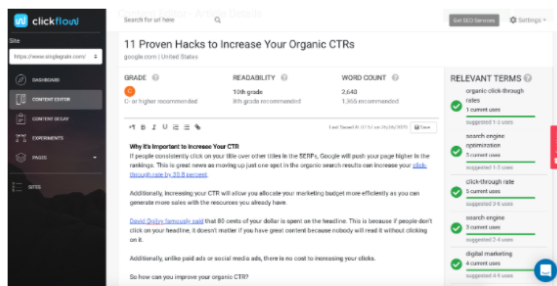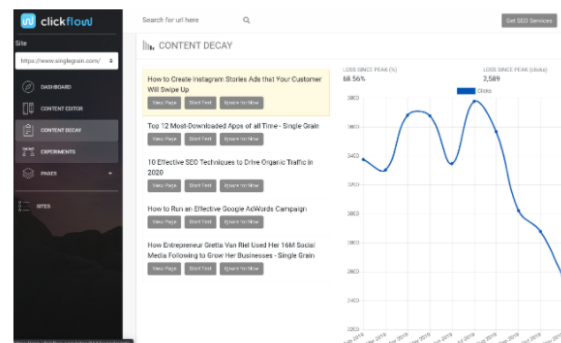

They also do an interesting job of integrating with Google Search Console data to show performance is changed. Where they fail is in not highlighting keywords from another source such as Semrush to indicate what they could potentially be ranking for.

We'd like to take this further by introducing a content performance score and a content potential score to inform optimizations.

CopyScience Application

We'll want to launch the application in four stages to get to market quickly and get feedback.

API Tech Stack

- Python
- Flask
- GPT-3 API (if required)
- Megatron-LM or the largest pretrained GPT-2 language model available
- T5-Large
- spaCy
- Hugging Face
- Other relevant language models that will work for our use cases
- Google Cloud GPU

Application

For the purposes of simplicity and ease of deployment and management, we want to make the application on a very common stack.

- Laravel
- React for the Laravel views
- Corcel - for integration with WordPress
- Google Cloud Platform with Google Workflows
- MySQL

Launch Functionality

The following is an overview of the functionality that we expect CopyScience to have at launch.

API Functionality

The core of the application is a Python API written in Flask on top of a series of NLP and language model libraries. Users will have direct API access with assigned API keys that can be limited to certain IP addresses. The core functions that the API should support are:

- **Text Generation -** The API should interact with language models. The user has the ability to specify sentence prompts and model options as part of an HTTP request.
- **Choose between language models -** The API should have specific endpoints for each model. Over time, we expect to add a series of models and preset option configurations for the user to choose from in their API requests.

- **Model Fine-tuning based on content provided -** The API should allow the user to submit a series of URLs, a CSV or a content upload to use for fine-tuning. The API should give a status on the fine-tuning process.
- **Analytics -** The API should give the user the ability to understand where they stand in their usage, billing and other utility requirements of using the API.

Application Functionality

The application will manage much of the core logic of the platform regarding user management, billing and reviewing text generation history.

- **Text Generation within Interface across all available types of text generation -** The interface will allow the user to provide a prompt or use a template to generate text. The text generated will be saved to a database for 60 days. For clarity, there will be a different section of the application for the different types of text to be generated. For example: Metadata, Ad Copy, Long Form Copy, Transcripts, Content Optimization.
- **Language Model Option selection -** Where relevant the interface will allow the user to choose which language model they want to generate text from
- **Model Fine-tuning based on SERP -** The user will be able to enter a search query and have the top 100 URLs that rank for that query used as the dataset to fine-tune the model. Thi
- **Model Fine-tuning based on content upload -** The user should be able to upload a CSV or text file to use for model fine-tuning.
- **Model Fine-tuning based on URL list -** The user should be able to provide a list of URLs to fine-tune the model.
- **User Management -** The user should be able to create and manage multiple users within their account.
- **Credit Card Acceptance -** The application should integrate with Stripe for accepting credit cards.
- **API Key Registration -** The application should allow users to register API keys.
- **Billing History -** The application should allow the user to see their billing history.
- **API usage History -** The user should be able to see the usage of the API
- **Cancel/Delete account -** Users should be able to delete their accounts from the interface.
- **Export to CSV -** Users should be able to export copy to a csv file.
- **Export to Google Docs/Sheets -** Users should be able to export copy to a Google doc or Google Sheets
- **Free trial -** Users should be able to sign up for a free trial where they can generate up to 1500 words.
- **Mailgun integration -** The application should integrate with Mailgun for the deployment of emails to users for a variety of messages.

Long Term Functionality

While we are focused on the MVP at this stage, we want to be mindful of long term features that we want to build so that the MVP is built to support them.

- **More Presets -** There should be a series of preset configurations for language models and their options.
- **More Templates -** There will be a series of prompt templates combined with language model option presets to create templates for content that will be generated.
- **Community Templates & Presets -** People should be able to make their presets and templates available for other users across the platform. This is not just to be limited to those within their account, but open and shareable to all users of the platform.
- **Choose from all available language models -** We will want to integrate all publicly available language models into the platform to give the user more options to choose from.
- **Bring your own GPT-3 key -** User will be able to bring an API key from GPT-3
- **Run a prompt across multiple language models at the same time**
- **Voting up and down the copy generated -** Users should be able to indicate whether or not they liked the copy that was generated by the model
- **Tagging the copy generated -** The user should have the ability to tag their copy with user-defined tags for whatever reasons they want to segment their work.
- **Export to WordPress -** Users should be able to deploy their copy directly to a new post in a WordPress instance
- **Open Apps integrations -** We want applications to be able to ingest our API using a given users account details.

Staged Rollout

We'd aim to do a staged rollout of features every two months. With the first rollout happening in late May.

Stage One (Ending May 31)

- Copy Generation based on SERPs for a target keyword
- Generate Tweets in your voice based on a list of URLs
- Generate Video transcripts with automated internal linking structure
- Content Optimization Editor
- CopyAI Key features
  - Ad Copy Generator
    - Facebook
    - Google

- - ■ LinkedIn
  - ○ Social Copy Generator
    - ■ Captions
    - ■ Instagram Posts
  - ○ E-commerce copy Generator
    - ■ Product Descriptions
    - ■ Product Benefits
    - ■ Microcopy
- Content Ideation based on Search and Social
- Export to CSV, G Docs

Stage Two (Ending July 31)

- FAQ & Glossary Generation
- Browser extension
- Voting up and down the copy generated
- Content Performance vs Content Potential functionality
- Complete parity with CopyAI
  - ○ Website Copy
    - ■ Hero Text
    - ■ Subheaders
    - ■ Meta Descriptions
  - ○ Blog Content
    - ■ Ideas
    - ■ INtros
    - ■ Lists
  - ○ Sales Copy
    - ■ Pain-agitate-solution
    - ■ Before-after-bridge
    - ■ Attention-Interest-Desire-Action
- Export to WordPress

Stage Three (Ending September 30)

- More Templates
- More Presets
- Choose from all available language models
- Bring your own GPT-3 key
- Tagging the copy generated
- Users should be able to deploy their copy directly to a new post in a WordPress instance
- Open Apps integrations

Stage Four (Ending November 30)

- Community Templates & Presets
- Structured Data to Text
- Automatic optimization of content based on what ranks
- More Integrations
- Copy generation based on knowledge graphs for accuracy
- Text to User Speech

CopyScience Marketing Site

In typically iPullRank fashion, we will launch a WordPress site with a focus on content marketing. Our goal is to make NLG accessible and demonstrate compelling use cases that drive free trials.

Pre-Launch

Before we launch the site, we want to post a pre-launch experience that will prepare people for the launch of the application.
- Interactive Content Experience - We'll launch a content experience that will act as a link and lead generating asset prior to the launch of the platform. This will be a data-driven interactive experience that talks about natural language generation in a compelling way.
- Form to sign up for free trial - The page will feature a form that drives users to sign up for the platform before it launches.

Launch

At launch we want to move the content experience to a new directory so it can continue to collect inbound links, but the existing link equity will now flow from the homepage to all other pages throughout the site.

Site Content at Launch

- Homepage
- Pricing
- Documentation
  - Example Code
    - Python
    - NodeJS
    - PHP
    - Apps Script

- Use Cases
- Blog
- FAQ

Email Marketing at Launch

At launch we'll run a nurture track that explains use cases to signups and compels users to start their free trial.

Post-Launch

After the application launches, we'll continue to update the website to support user acquisition with a goal of 5000 free trials that convert to 1000 paying users in the first 3 months.

Content Post-Launch

Once the site is launched, we'll systematically launch the following content assists to drive user acquisition.
- Paid Media Landing Pages
- Social Ads
- Use Case blog posts
- Model comparison blog posts
- How-to videos
- Webinar
- Guide to Natural Language Generation for SEO