Anchor®
BY SPOTIFY

PROJECT CHARTER

TEAM BLUE PANDA

PROJECT CHARTER

Our Project Charter provides a formal description of the MVP and the associated strategy that will aid in the establishment of the project's foundation, including objectives, key milestones, success metrics, and project requirements. The charter will aid in the development of more detailed project specifications.

1. General Project Information

Project Name:	**Spot-Hate**
Problem Summary:	Hate speech is harmful to people of marginalized identities. Podcasts can often be vehicles for this harmful rhetoric. There are currently no podcast or audio recording platforms that proactively detect and flag hate speech before content is released. As it stands, listeners come across instances of hate speech without warning and report concerns about episode content in hopes that some action is taken. Hate speech detection prior to the release of an episode would increase awareness of harmful language in creators and prevent listeners from consuming content they might find offensive.
Value Proposition:	**Spot-Hate,** Anchor's proprietary hate speech detection feature serves to address current pressing hate speech issues persistent on social media by enabling podcast creators (anchor users) with an option to mitigate possible hate speech content ensuring inclusive and neutralized content for their audience.

2. Project Team (Blue Pandas)

Roles:	**Product Manager**	**Product Owner**	**Project Manager**	**Scrum Master**	**Designer**
Name:	Joy Gassama	Nakul Sarwate	Sanghita Datta	Manthan Mehta	Ansh Shah

3. Risks

Technology: If existing data is not properly cleaned and transformed, it can seriously jeopardize the accuracy of the ML model in development.

Business: Despite the technical team's expertise, a delay in model development and its failure to replicate moderation results may result in advertisers refusing to agree to Spotify's increased fee.

Customers: There is a risk that the interface and overall experience of the new feature will fall short of customer expectations, resulting in backlash against the creators.

4. Assumptions

Technology: The existing data allows the engineering team to start developing the ML model to detect hate speech. The consultants have the technological know-how to create the necessary ML model that auto-detects at a rapid pace.

Business: The analytics team anticipates a 32% increase in the monthly podcast creation rate once the speech detection feature is implemented. Advertisers expressed interest in the potential feature and agreed to a 12% increase in ad fees following implementation.

Customers: Podcast creators, advertisers, and audiences are concerned about the impact their podcast is having and the possibility of an outrage if there are elements that are harmful to certain segments of society.

5. Key Success Metrics

a. Increased User Retention (%)

b. Enhanced Platform-User Engagement (%)

c. Increased Market Share (%)

d. Hate speech detection accuracy score

e. % reduction in episodes tagged 'Potentially offensive'

f. Employee satisfaction score

6. Budget Estimation

Total estimated- Fixed Cost: 962,400 $ **Variable Cost:** 32,200 $
Estimated time:- 28 weeks.

Direct Costs: Human Capital (Team Members, Data Consultants, Project Manager etc), Hardware, Software

Indirect Costs: Maintainance and Support, Marketing Promotions, Reserves

Total Cost (Fixed/Variable): Headcount of Resources*Total Fixed/Variable Cost (per unit, per hour)*days per week*no. of weeks*working hours
Total Cost = Fixed + Variable = 994,600 $

7. In-scope

- Conducting user interviews for requirement gathering and analysis.
- Estimating the budget and Net Present Value (NPV) along with stakeholders.
- Feature development: Dedicated team of machine learning engineers to build an AI model for natural language processing.
- Historical data collection for model training.
- Resource management for panel of moderators to identify hate content manually.
- Front-end UI development for web applications.
- Security enhancements for audio data protection.
- Post launch product maintenance, accuracy enhancement, documentation handover to stakeholders.
- Application support for troubleshooting and customer feedback.

8. Out of scope

- **Planning for iteration on initial MVP:** Though the initial MVP is solid enough for release, it will need to be iterated upon to optimize the feature to better meet the evolving needs of users.
- **Budget:** The financial resources that can be dedicated to rolling out this feature are limited.
- **Customization:** Users should be able to provide greater context about the content of their show to enhance their experience with this feature, as some subject matter may center on marginalized communities and wrongfully be flagged.
- **Technical Debt:** As this is the initial iteration of this feature, related technical debt does not yet exist
- **Marketing:** This feature requires a marketing strategy to increase awareness among current users and draw in future users.
- **Mobile Application Compatibility:** Though most users primarily record on the computer application, our mobile application can be used to record and release episodes as well.

9. Project Timelines

Start Date: 24th October 2022 | **Completion Date: 15th May 2023**

Milestone	**1**	**2**	**3**	**4**	**5**
Description	User Interviews and Stakeholder Identification	Scope Definition, Budget Estimation and Stakeholder Approval	Data Modelling, Design and Development	Beta Testing, Accuracy Enhancements and Debugging	Deployment, Launch and Support
Time Required	4 weeks	4 weeks	9 weeks	4 weeks	7 weeks

BUY VS BUILD ANALYSIS

Anchor underwent a buy and build analysis, and based on Spotify's existing technical and resource prowess, the decision to buy, build, or even a combination of the two was made.

Criteria	Rank	Weight	Buy vs Build	Impact on size
Data	1	20%	 Hybrid	Data required to train the ML models needs to be fetched from spotify's historical records as well as outsourced from repositories storing hate speeches, which will require huge amount of time and resources.
Moderation	2	20%	 Buy	It will take a lot of analysis and research to choose the right panel of moderators for manually flagging hate speech in the early MVP stages. This component will be outsourced to avoid bias.
Design	3	15%	 Build	To make it a proprietary product for Anchor, the desgining and ideation will be in-house based on the data collected and research done so that it is feasible with the existing solution
Development	4	15%	 Build	Internal software development will take a moderate amount of time and effort, including the training of the ML algorithm development of the web application.
Testing	5	15%	 Buy	Testing will be outsourced to vendors because it will be a more exhausting and intensive procedure requiring testing of both the human moderation and the automated ML model.
Support & Maintenance	6	10%	 Hybrid	The vendor should have complete ownership of moderation, so this component will not be in-house, and the ML algorithm will be maintained in-house.
Customer Service	7	5%	 Build	Consistent, quality customer service helps retain customers. In order to maintain tight control over the standard of customer service, Anchor will train and hire customer service agents in-house.

PHASE SCOPING

After the Buy vs. Build analysis was completed, 5 phases for the feature development process were devised, providing an in-depth view of the scope criteria from feature conception to feature release

	Phase	Title	Task Description	Headcount	Scope (weeks)	Dependencies	Risk level
Phase-I	Project Conception	Research	Reasearch about hate speech ML modeling, data set creation, continous training methodology	3	1	ML platform	**Low:** Only a limited number of resources are required, and the majority of the data is already available.
		Projections	Projecting usage of the new feature	2	2	User Research	
Phase-II	Project Definition and Planning	Project Charter	Describes the product, service and results to be accomplished	2	1	Product Management	**Low - Medium:** This phase requires slightly more resources as well as cross-collaboration between teams.
		Scope and Goal Setting	Defining the different phases, milestones and timelines	3	2	Engineering and Product Management	
		Communication Plan	Communicating with different stakeholders	3	2	Product Management	
Phase-III	Design and Development	Detailed feature design	In-detail design for every component involved	2	1	UX and Engineering	**Medium - High:** Concrete labor and investment is shared cross functionally among teams. Non-conformities may arise. Potential bugs or errors may materialize and delay release.
		Speech to text improvements	Improving the accuracy of the ML models	3	2	Engineering, ML platform	
		Hate detection models training	Training the ML models for hate speech	4	4	ML platform, Engineering	
		Hate detection models integration	Integrating Hate detection models with the Platform	3	2	ML platform, Engineering	
Phase-IV	Testing	Integration testing	Beta and E2E testing for the feature	3	2	Engineering support	**Medium - High:** Identifying and resolving bugs is critical for a smooth feature release.
		Performance Monitoring	Monitoring the performance of the new feature deployed	3	2	Engineering support	
Phase-V	Release & Feature Improvements	MVP release	Launching the feature	3	2	Engineering support, UI/UX	**High:** More resources are needed for a successful feature release, scaling the feature for a growing user base, and working towards improving the feature.
		Model training improvements	Incorporating feedbacks and fixing bugs	4	3	Engineering	
		Additional monitoring	Based on the MVP release learning, put additional matrix and monitoring	3	2	Engineering support	

BUDGET

The estimated budget below represents the total cost of all activities and milestones that the project will complete. In short, it is the total amount of money required to complete the project that must be approved by all stakeholders.

Category	Items	Count	Fixed Cost/Unit/hr ($)	Maintenance cost/Unit/yr	Total fix cost ($)	Total variable cost ($)/yr
Headcount	Project Manager	1	60.00	-	187,200.00	
	Project Team Member	5	50.00	-	780,000.00	-
	Contaractor (Data Consultant in-house)	3	40.00	-	374,400.00	-
	Moderator	5	30.00	-	468,000.00	-
Hardware	Physical Server Costs	3	-	1,500.00	-	4,500.00
Software	Licensed Software (ML)	1	-	1,200.00	-	1,200.00
	Platform License (IDE)	3	-	500.00	-	1,500.00
	Firewall	1	-	5,000.00	-	5,000.00
	Prototyping Software (Eg: Figma)	3	100.00	-	3,000.00	-
Maintenance & Support	Training cost (code debugging, documentation)	2	100.00	-	2,000.00	-
	Maintenance cost (user feedback, server maintenance)	-	-	20,000.00	-	20,000.00
Marketing/Promotion	Marketing	-	-	-	50,000.00	-
	Promotions	-	-	-	25,000.00	-
Reserves	Buffer	-	-	-	10000	-
Total ($)					**932,400.00**	**32,200.00**

GANTT CHART

Based on the scope and phases previously discussed, the Gantt chart below provides a possible week by week schedule to achieve each milestone and keep the project on track.

PROJECT TITLE	Feature Development: Hate Speech Detection	COMPANY NAME	Spotify Anchor
PROJECT MANAGER	Terri Eccles	DATE	10/21/2022

Anchor by Spotify

WBS NUMBER	TASK TITLE	START DATE	DUE DATE	DURATION (weeks)	PCT OF TASK COMPLETE	PHASE ONE					PHASE TWO				PHASE THREE									PHASE FOUR				
						Week					Week				Week									Week				
						1	2	3	4	5	6	7	8	9	12	13	14	15	16	17	18	19	20	22	23	24	25	25	26
1	Project Conception																											
1.1	Project Charter	12/5/22	12/16/22	2	0%																							
1.2	Research	12/19/22	12/26/22	1	0%																							
1.3	Projections	12/19/22	12/30/22	2	0%																							
2	Project Definition and Planning																											
2.1	Charter revisions	1/2/23	1/6/23	1	0%																							
2.2	Scope and Goal Setting	1/9/23	1/20/23	2	0%																							
2.3	Communication Plan	1/20/23	2/3/23	2	0%																							
3	Design and Development																											
3.1	Detailed feature design	2/6/23	2/10/23	1	0%																							
3.2	Speech to text improvements	2/13/23	2/27/23	2	0%																							
3.3	Hate detection models training	2/13/23	3/10/23	4	0%																							
3.4	Hate detection models integration	3/13/23	3/27/23	2	0%																							
4	Testing																											
4.1	Integration testing	3/27/23	4/7/23	2	0%																							
4.2	Performance Monitoring	4/3/23	4/14/23	2	0%																							
5	Release & Fearture Improvements																											
5.1	MVP release	4/17/23	5/5/23	2	0%																							
5.2	Model training improvements	4/17/23	5/5/23	2	0%																							
5.3	Additional monitoring	4/24/23	5/5/23	2	0%																							