

# Wong's Solutions

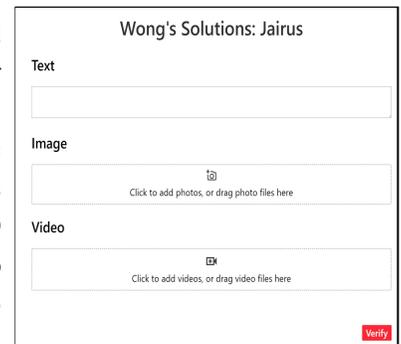
## 16. Micronsoft

### Executive Summary

The low barriers to entry of e-platforms have engendered the modern democratisation of media. Swathes of information inevitably come with large volumes of falsehoods (including “deepfakes” and synthetic online media) and users tend to be insufficiently aware of their accuracy. This leads to propagation of fake news which may stymie social cohesion and incite political polarisation. Wong's Solutions strives to enable individuals, enterprises and governments to verify the veracity of stories through the AI-empowered and community-oriented application, *Jairus*. We capitalise on AI-based algorithms while attracting users by rewarding them for actively contributing to our product's accuracy, addressing the prohibitive costs, low scalability and insufficient confidence in manual fact-checking initiatives.

### Product Summary

*Jairus* is a unified interface synthesising modern technologies and community-based truth-verification methods to combat misinformation on various mediums. For textual/audio inputs, our AI model extracts keywords, comparing it against credible sources updated via government information. Our Multiple Natural Language Processing Embedding models then calculate similarities between inputs and sources of credible information. Technical measures like randomising IP addresses and UID tokens will also be used to reduce the possibility of obtaining biased results due to trackers and cookies. For images/videos, specialised AI models can be employed to detect possibly altered images and videos using technologies like DeepFake. Using the DeepFake algorithm and similar image altering techniques, our models will be trained as adversarial learning algorithms which reverse engineer the distortion process and identify its weaknesses. Finally, we combine outputs from the 4 domains into a multi-modality AI model, generating a holistic “trustworthiness” rating.<sup>1</sup> This comprehensive coverage of data is applicable to all mediums, even offline outlets like radio and television. Content above the 70th percentile for “falseness” will be flagged as fake news.



This interface will be available as a website/extension at the following prices, with large-scale institutions like firms and governments charged less.

Product	Prices
Text, Audio and Image “Checking”	\$0.10/100 checks for consumers \$0.10/1000 checks for institutions
Video “Checking”	\$0.20/100 checks for consumers \$0.20/1000 checks for institutions

Moreover, an iterative, community-based system can enhance the long-term reliability of these algorithms while boosting consumer trust. Users disagreeing with “trustworthiness” ratings of various content can flag them - when more than

20% of viewers flag a post, our central staff will rigorously review its validity. Users who accurately identify content with inaccurate ratings are rewarded with digital tokens; each can be exchanged for \$0.01 or accumulated for discounts on our products. This increases user participation and trust while providing greater sample data for our model's Recurrent Neural Networks and Long Short-Term Memory Deep Learning methods, boosting its accuracy.<sup>2</sup>

### Market Research

The trustworthiness of current social media fact-checking services is largely dependent on their origin.<sup>3</sup> Consumers harbour doubts over the impartiality of fact-checked information owing to the profit-maximising aims of social media companies such as Meta and Twitter and the lack of transparency over algorithms used.<sup>4</sup> Another shortcoming is the largely unidirectional process of user interaction that does not involve the direct beneficiaries of such services, accentuating the need for a more credible and community-oriented service.

<sup>1</sup> <https://arxiv.org/abs/2205.09817>

<sup>2</sup> <https://www.scirp.org/journal/paperinformation.aspx?paperid=109149>

<sup>3</sup> [https://www.researchgate.net/publication/319254280\\_Trust\\_and\\_Distrust\\_in\\_Online\\_Fact-Checking\\_Services](https://www.researchgate.net/publication/319254280_Trust_and_Distrust_in_Online_Fact-Checking_Services)

<sup>4</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2301235](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2301235)

Existing competitors such as Fact Checker by the Washington Post and UK-based Full Fact are inherently inefficient as they do not share repositories. The lack of a universal fact-checking database<sup>5</sup> leads to inefficiency considering the overwhelming volume of disinformation. This leads to less scalable and more labour-intensive business models, rendering such operations unsustainable.<sup>6</sup> However, the fact-checking market is now dominated by established news outlets such as Agence France-Presse and Reuters who have access to their own information databases.<sup>7</sup> This is a potential limitation because the streamlined process of obtaining information is a feature that our solution does not enjoy in the initial stages of development. Nevertheless, this entails that our product will be comparatively impartial since our data stem from a broad range of sources, gleaned from by our AI-powered algorithm.

### **Marketing Strategy**

Our progressive marketing strategy promotes *Jairus* to 2 target audiences: (1) the general public and (2) social media companies. Step 1 is to increase visibility of our product to the general public through targeted advertising on social media and the Internet. The focus of our advertisements is to explicitly highlight our primary product advantage --- the seamless integration of cutting-edge technology and community participation. We will place emphasis on our unique token reward scheme, enabling users to play a part in the algorithmic process of our fact-checking service through flagging posts they disagree with online. This sense of ownership and involvement makes users feel valued, building public confidence and enhancing our service’s credibility.<sup>8</sup>

Step 2 specifically targets media enterprises. We will pitch our solution as an industry-leading tool crucial in allowing them to verify primary sources upon which their reporting will be based. Furthermore, we can leverage on a solid user base and fact-checking community built from Step 1. By raising awareness and underlining the importance of objective fact-checking, there is likely to be an increase in demand by users for social media firms to ensure that published content is accurate. This exerts pressure on firms to purchase our AI fact-checking service to present a socially responsible public image of themselves, catering to consumer preferences to grow their user base.<sup>9</sup>

Another key competitive advantage of having a sizable user base is the reaping of internal economies of scale as the marginal cost of hosting new users (in terms of server infrastructure upkeep) falls when total volumes increase, thereby addressing current market inefficiency due to the disjointedness of individual fact-checking organisations.

### **Financial Plan**

To finance our business’ initial start-up costs, a mix of coupon bonds (39.1%), convertibles (26.1%) and equity (34.8%) will be used. As approximated by our Discounted Cash Flow (DCF) model, coupon bonds (\$13500) will primarily be bought by governments given the positive externalities of combating misinformation;<sup>10</sup> equity (\$12000) will be offered to private investors seeking high returns for a low-cost investment; convertibles (\$9000) providing a balance between security (fixed coupons) and potential upside (convertible element) will be offered to both.

Year	2022	2023	2024	2025
<b>Total Revenue</b>	12,000	17,700	29,790	47,936
Companies	6,000	9,600	19,200	34,560
Governments	4,000	5,800	7,830	9,788
Individuals	2,000	2,300	2,760	3,588
<b>Total Costs</b>	18,600	23,010	29,790	38,348
Cost of Goods Sold	7,800	9,735	13,406	19,174
Sales and Marketing	3,600	4,425	5,958	7,190
R&D	7,200	8,850	10,427	11,984
<b>EBIT</b>	(6,600)	(5,310)	0	9,587
<b>Net Income</b>	(6,750)	(5,650)	(570)	10,985
<b>Financing Cash Flow</b>	11,000	9,000	4,000	2,000
<b>Free Cash Flow</b>	4,350	3,450	3,530	13,085

While our product is unlikely to turn a profit during initial years due to high start-up costs, we project that the company will turn over a profit by its 4th financial year as revenues steadily increase. Meanwhile, our flexible financing plan also ensures the maintenance of a positive cash flow throughout the product’s development to sustain necessary operations.

<sup>5</sup> <https://www.cits.ucsb.edu/fake-news/protecting-ourselves-fact>

<sup>6</sup> <https://www.poynter.org/fact-checking/2016/why-do-fact-checking-sites-close-and-how-can-new-ones-avoid-that-fate/>.

<sup>7</sup> <https://factcheck.afp.com/fact-checking-afp>

<sup>8</sup> <https://www.health.state.mn.us/communities/practice/resources/chsadmin/community-relationships.html>

<sup>9</sup> <https://www2.deloitte.com/us/en/insights/industry/technology/study-shows-news-consumers-consider-fake-news-a-big-problem.html>

<sup>10</sup> <https://cordis.europa.eu/project/id/780355>