

RIC CODEFUSION- NEWTON'S APPLE

Team : Webchefs

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Problem Overview



Background

- 👉 20% of soldiers experience PTSD, impacts their mental health and operational effectiveness (DoD, 2023).
- 👉 Critical delays in secure communication and threat intelligence cost lives.
- 👉 35% retired soldiers struggle with unemployment (NGO Veterans Report, 2022).

Significance

- 👉 Streamline mental health support, secure operations, and post-service livelihoods.
- 👉 **Impact:** Improve soldier safety, enhance mental health, and financial stability for over 2.6M+ veterans.

Analysis

Key Challenges



Mental Health Crisis

60% of soldiers avoid treatment due to fear and stigma, not seeking it because of the negative effect it might have on their careers, so PTSD and trauma remain untreated. This does not only harm individual welfare but also unit morale and combat readiness (NIH).



Security Vulnerabilities

Military operations use outdated communications systems that aren't end-to-end encrypted, and remains vulnerable to cyber attack and interception by enemy forces. Military data isn't just an option to guard but a necessity to ensure national security (Pentagon Report, 2021).



Economic Instability

50% unemployment because of hard time transitioning to civilian careers with their specialized military skills, which are underappreciated in the civilian marketplace. This leads to economic insecurity, loss of mission, and more mental health problems, creating a cycle of post-service instability.

For Active Soldiers:

- 30% faster PTSD intervention via sentiment analysis.
- 90% fewer communication breaches.

For Veterans:

- Earn and support the families via skill-sharing (pilot data).

User Impact

For Agencies:

- Real-time threat dashboard with AI-filtered intel.



**Our
Services
Are For**

• Veterans

• Active Soldiers

• Agencies

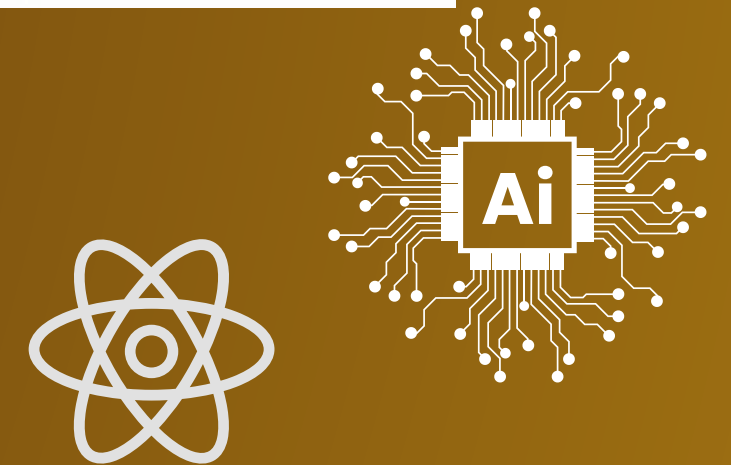
Proposed Solution

ShieldGuard Platform

- ✓ **AI-Driven PTSD Companion:** An AI-based chatbot designed specifically to deal with military-trauma cases, offering instant emotional support, guided therapy sessions, and crisis management to soldiers in a discreet and accessible way.
- ✓ **Blockchain-Secure Communication:** A bulletproof, end-to-end encrypted communication system leveraging blockchain to rule out interception risks, ensuring secure, real-time intelligence sharing for military operations.
- ✓ **Veteran Skill-Sharing Hub:** An environment fueled by the gig economy where veterans have the opportunity to upskill, mentor, and monetize their expertise, creating a sustainable jobs network that fills the post-service employment gap.
- ✓ **Real-Time News & Threat Intelligence:** A centralized intelligence hub that aggregates real-time reports from the battlefield, cyberattacks, and authenticated military news from AI-based analysis. The function keeps agencies and soldiers updated and restricts the spread of misinformation as well as improves rapid decision-making.

Tech Stack

- ✓ AI: TensorFlow, GeminiPro (PTSD chatbot).
- ✓ Backend: Express/ Flask and FastAPI(might use it for AI feature deployment).
- ✓ Blockchain: To be decided while implementing.
- ✓ Frontend: React.js, React Native(expand to mobile app if time permits).



The Biggest Advantage of our Solution and Problem Statement

- No Direct Competition
- Business Potential
- Practically achievable goals
- Important Problem to be solved
- Good Cause + Social Impact
- Technical Expertise of our team

Roadmap & Plan

We Will surely implement the PTSD Chatbot, GIG Website for Veterans teaching to the current Active Army Officers, We will try our best to implement the Secure Messaging, at-least prototype will be ready by the submission time and will try to increase its reach by making an android mobile app version of this solution. The feature of fake news detection and making the alerts based on it will be undergoing the full time as it needs to be perfect.

Roadmap

NLP Model Training or Finetuning an Opensource LLM for PTSD Chatbot

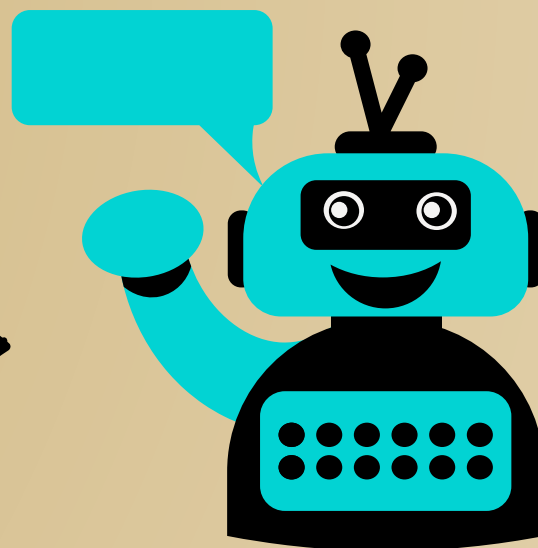
Basic Setup for the Blockchain integration in the Secure Messaging service

Website layout and Ui/UX + Deployment of the made website and integrating the features

Testing and Error Solving, if everything goes well then expanding to Mobile App for the same.



User



PTSD
Chatbot



Escalation to
counsellor

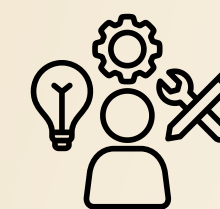
Encrypted
Message

Blockchain
validation

Solidier



Receiver



Skill Profile



Veteran



Payement
Gateway



System Architecture

Innovation Highlights

Military-First Design



Tailor-made for military purposes keeping the challenges and hurdles they face for a better and more suitable solution approach.

Veteran-to-Veteran Economy



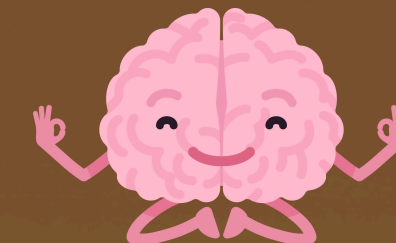
Increases a sense of Bonding and we try to build a community for a holistic development experience.

AI Fake News Filter



We try to tackle the False Positives and saving the resources of our nation which gets in vain due to fake news actions.

Focus on Unexplored Mental Health part of soldiers



Analyze and work upon one of the most crucial problems people face in today's date.

Conclusion & Call to Action



Why Trust Us?

- ✓ Saves lives, secures data, empowers veterans.
- ✓ Scalable to police, firefighters, and NGOs.
- ✓ Unique approach to a very important and unexplored Problem Statement.

Winning Helps us in?

- ✓ Conduct a Market Analysis Before Deploying the Products
- ✓ Extend its usability using IoT wearables (e.g., anxiety-detecting smartwatches).
- ✓ Partner with Government using the recognition and Testament of its practical usability.