

C4GT DMP - Proposal Template

Name	BHUMIKA S
Email ID	bhumikasp.2004@gmail.com
Phone Number	8431465524
GitHub ID	https://github.com/Bhumika-SP
Discord ID	https://discord.com/users/bhumika_2608_34831
Current occupation <i>(Working Professionals - add current organization & years of exp)</i>	Student
Education Details <i>(College Name - Degree Name and branch of engineering or other course/specialization)</i>	College Name – Rajarajeshwari College of Engineering Branch – Computer Science and Engineering
Technical skills with level <i>(Mention tech skills/languages known/UI-UX and level - Novice/Intermediate/Expert)</i>	Languages: C, Java, JavaScript, Python Web Development: HTML, CSS, Bootstrap, Tailwind, React, Node.js, Express.js Database: MySQL, Mongo DB Machine Learning Libraries: Numpy, Pandas, Scikit-Learn, Matplotlib Platforms: PyCharm, Jupiter Notebook, IntelliJ IDEA, AWS, GitHub

Title:

Secure and Smart Finance: Building a Comprehensive Platform for Fraud Detection and Financial Management

Summary

My vision for this project is to develop a unified, secure, and user-friendly platform that enables individuals to manage their crypto and fiat assets seamlessly while being protected against fraudulent activity. I plan to integrate real-time fraud detection, portfolio tracking, and personalized financial insights. My approach includes modular development, leveraging open-source tools, and aligning closely with community and government standards.

Project Detail

1. Project Overview:

a. Understanding of the project

This project involves building a technology solution that integrates three core functionalities:

- **Fraud Detection:** Detect suspicious patterns in financial behavior using ML techniques.
- **Cryptocurrency Portfolio Tracking:** Monitor crypto asset prices and provide real-time portfolio valuation.
- **Personal Finance Assistance:** Track expenses, offer budgeting tools, and provide spending insights.

b. Issues that might come up and the support needed from org

- Access to anonymized datasets for training fraud detection models.
 - Clarification on compliance with financial regulations and data handling.
 - API access or integration guidance for third-party financial data sources.
- Support needed: Periodic feedback, access to mentors, and clarity on integration expectations with government systems (if applicable).

c. Solutions

- Use public datasets or synthetically generated data to begin development.
- Implement modular architecture to remain adaptable to changing regulatory requirements.
- Use open APIs (e.g., CoinGecko, Plaid) for data integration while planning for long-term interoperability with government-backed services like IndiaStack.

2. Macro Implementation Details with Timelines:

a. Milestone 1 (Week 1-3):

- Finalize technical stack and architecture
- Create base modules for data ingestion (crypto APIs, banking data)
- Set up version-controlled repository and CI/CD pipelines

b. Milestone 2 (Week 4-6):

- Implement core fraud detection engine using rule-based and ML techniques
- Build personal finance dashboard (expenses, insights, budgeting)
- Integrate crypto tracking with real-time valuation

c. Milestone 3 (Week 7-9):

- Refine UI/UX and add security layers (2FA, data encryption)
- Optimize performance and test edge cases
- Conduct feedback sessions and prepare documentation for handover

Availability

Number of hours available per week: 25–30 hours

Other engagements: None significant that will impact this project

Additional notes: Available for regular sync-ups, async updates, and weekend collaboration if needed

Personal Information

About Me:

I am a passionate developer with an interest in fintech and security. I enjoy building scalable applications that solve real-world problems.

Motivation:

This project perfectly aligns with my interests in cybersecurity, personal finance, and emerging technologies like cryptocurrency. I am excited by the opportunity to contribute to a real-world problem with social impact. Working under the C4GT initiative provides an excellent opportunity to collaborate with government systems and build tech that can be used at scale. This project also offers a chance to sharpen my technical, design, and planning skills while solving problems that matter.

Please mention if you have solved any issues/tickets for this or other C4GT projects: (Optional)

Link to to Issue	Resolution description in short	Link to pull request
https://github.com/AgentTorch/visualize/issues/3	Added example usage with inline comments for GeoPlot visualization to improve developer onboarding and open source clarity.	https://github.com/AgentTorch/visualize/pull/62

Add more rows if required