

Hedron DeFi AI Agent
AI-powered DeFi navigator & educator
democratizing Hedera Hashgraph DeFi

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Hello Future Hackathon

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Agenda

- 1 Team Introduction
- 2 Project Overview
- 3 Technical Innovation
- 4 Market Integration & Success
- 5 Future Roadmap
- 6 Demo & Live Showcase
- 7 Conclusion

Meet Our Team



Ashutosh Kumar

Developer Relations

INDIA

- Community Building
- Developer Advocacy
- Technical Docs



Sebastian Diaz

Lead Developer

COLOMBIA






- Full-Stack Development
- AI/ML Integration
- Smart Contracts

Expertise: Blockchain, AI, DeFi & Communities

The Problem We're Solving



Novice Users Challenges

-  **DeFi ecosystem complexity** overwhelming new users
-  **Technical knowledge barriers** prevent participation
-  **High risk of losses** from uninformed decisions
-  **Fragmented information** across platforms
-  **Lack of educational guidance** for DeFi concepts



Expert Users Pain Points

-  **Inefficient manual monitoring** of multiple protocols
-  **Missed arbitrage opportunities** in fast markets
-  **Complex comparative analysis** between protocols
-  **Lack of automation tools** for data-driven decisions
-  **Time-consuming yield optimization** research

Result: DeFi remains inaccessible to novices while experts waste time on manual tasks





Our Solution: Hedron DeFi AI Agent



AI-Powered DeFi Navigator & Educator



Conversational AI Interface

-  Real-time WebSocket communication
-  Natural language queries
-  Contextual educational guidance
-  Step-by-step DeFi tutorials







Multi-Protocol Analysis

-  SaucerSwap DEX (+44% TVL)
-  Bonzo Finance lending (\$38M)
-  AutoSwapLimit orders
-  Infinity Pool staking







Smart Automation

-  Non-custodial security
-  External transaction signing
-  Automated yield optimization
-  Risk assessment tools

Technical Architecture & Innovation





Real-Time Communication



-  WebSocket persistent connections
-  Multi-user session management
-  7 message types flow
-  Scalable real-time architecture





AI Intelligence Layer



-  Persistent conversation memory
-  Educational guidance system
-  Intent-based tool routing
-  Contextual learning feedback





DeFi Integration Suite



-  25+ specialized tools
-  REST APIs & Smart contracts
-  Rate limiting & optimization
-  Native HTS/HCS support

Security & Performance



-  Non-custodial external signing
-  30-second smart caching
-  TypeScript & Zod validation
-  Intelligent rate limiting

Comprehensive DeFi Platform Integration

SaucerSwap Integration



- ✓ +44% Hedera DeFi TVL
- ✓ +60% unique wallets
- Token swap quotes & execution
- Real-time price discovery
- Infinity Pools staking

Bonzo Finance Integration



- ✓ \$38M TVL (Q4 2024)
- ✓ Aave V2 fork architecture
- Supply assets for interest
- Real-time lending rates
- Risk assessment tools

AutoSwapLimit Features








- ✓ Advanced limit order system
- ✓ Automated execution
- Price monitoring & alerts
- Order management
- Strategic trading automation






Result: Comprehensive DeFi ecosystem coverage with educational guidance

Comprehensive Use Cases

Novice User Scenarios

-  "What are the best yield opportunities on SaucerSwap?"
-  "How does lending work on Bonzo Finance?"
-  "What are limit orders and how can I use them?"
-  "Explain DeFi risks and safety practices"
-  "Guide me through my first yield farming"

Expert User Scenarios

-  "Show me best APYs between SaucerSwap and Bonzo"
-  "Set up automated limit orders for my strategy"
-  "Analyze my positions across all protocols"
-  "Alert me when HBAR drops below \$0.10"
-  "Find arbitrage opportunities in real-time"

From education to automation: serving both learning and earning goals

Success Metrics & Validation

✓ Technical Implementation

- **WebSocket Agent:** Multi-user real-time system
- **25+ DeFi Tools:** Complete integration suite
- **AI Intelligence:** LLM with persistent memory
- **7 Message Types:** Comprehensive communication

👥 Market Innovation

- **First AI agent** with AutoSwapLimit integration
- **Natural language** DeFi operations
- **Intent-based routing** to specialized tools
- **External signing** for maximum security

Result: Production-ready AI agent with comprehensive Hedera DeFi integration

Key Benefits & Value Proposition

Time & Efficiency

- ✓ **Time savings:** Automated analysis vs manual research
- ✓ **Maximized yields:** AI identifies best opportunities
- ✓ **Real-time optimization:** Continuous monitoring
- ✓ **Multi-protocol analysis:** Unified dashboard view

Accessibility & Automation

- ♥ **Democratizes DeFi:** Access for all skill levels
- 💬 **Natural language:** No technical jargon required
- 🤖 **Smart automation:** Intent-based tool routing
- 🕒 **Contextual guidance:** Step-by-step tutorials

Security & Education

- 🔒 **Non-custodial:** Never holds user funds
- 🎓 **Educational layer:** Learn while earning
- ⚠️ **Risk reduction:** Comparative protocol analysis
- 👤 **External signing:** Maximum security

Market Impact

- ⬆️ **Increases Hedera adoption:** Easier DeFi UX
- 💡 **Innovation leadership:** First AI agent with AutoSwapLimit
- 👥 **Community building:** Educational content creation
- 🔗 **Open source:** Contributions back to ecosystem

Enhanced Future Roadmap

Phase 1: Enhanced Features

- **Advanced SaucerSwap:** Liquidity pool analytics & farming optimization
- **Smart alerts:** Automatic notifications for opportunities
- **Web dashboard:** Graphical interface complement
- **Enhanced tutorials:** Interactive DeFi learning modules

Phase 2: Advanced Intelligence

- **Expanded Bonzo tools:** Liquidation monitoring & advanced strategies
- **AutoSwapLimit improvements:** Sophisticated order types
- **ML predictions:** AI-powered yield forecasting
- **Portfolio optimization:** Automated rebalancing

Phase 3: Ecosystem Expansion

- **Additional protocols:** HeliSwap, Stader Labs integration
- **Advanced analytics:** Cross-protocol yield comparison
- **API access:** Third-party integrations
- **Enterprise solutions:** Professional trader tools

Community Impact Goals

- **Democratize DeFi:** Making complex protocols accessible
- **Educational mission:** Comprehensive DeFi literacy program
- **Hedera growth:** Driving ecosystem adoption
- **Open source:** Contributing tools back to community

Live Demo Showcase

▶ WebSocket Agent Demo

🖥️ Agent Interactions

- **CONNECTION_AUTH:** User authentication
- **Natural language:** "Show me SaucerSwap yields"
- **SWAP_QUOTE:** Structured price data
- **AutoSwapLimit:** "Set limit order 1000 SAUCE"
- **Multi-step flows:** Bonzo deposits

🔗 Technical Demo Points

- **WebSocket messages:** Real-time communication
- **25+ DeFi tools:** Intelligent routing
- **Memory persistence:** Context awareness
- **Transaction flow:** External signing
- **Error handling:** Graceful failures

Demo Command: `npm run start:websocket`

Why Hedera DeFi AI Agent Wins

Innovation

- **First AI WebSocket agent** for Hedera DeFi
- **25+ specialized tools** integration
- **Intent-based routing** system

Technical Architecture

- **Real-time WebSocket** communication
- **Persistent memory** for context
- **Multi-user sessions** support

DeFi Integration

- **SaucerSwap**: DEX, quotes & Infinity Pools
- **Bonzo Finance**: Lending & borrowing
- **AutoSwapLimit**: Advanced limit orders

Agent Capabilities

- **Natural language** DeFi operations
- **7 message types** for comprehensive flow
- **External transaction** signing

Market Impact

- **Democratizes DeFi** access for all users
- **Reduces complexity** through AI assistance
- **Enables automation** without custody

Production Ready

- **TypeScript & Zod** validation
- **Comprehensive error** handling
- **Smart caching & rate** limiting

Thank You!

♥ Thank You!

Questions & Discussion

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GitHub: `github.com/rofergon/Hedron`

Demo: [YouTube link to be inserted]