FREYA LIU

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Experienced and versatile Smart Contract Developer with two years of hands-on experience in designing, developing, and deploying secure and efficient smart contracts on the Ethereum and Layer 2 solution like Polygon. My expertise extends to three years in machine learning and macOS development, where I've successfully integrated advanced computational models with practical software solutions. I have a robust command of smart contract development and optimization. I am also well-versed in a variety of DeFi protocols, with specific expertise in mechanisms like yield farming and liquidity mining. Adept at collaborating with cross-functional teams to deliver innovative blockchain and software solutions.

PROFICIENCIES

- **Programming Languages:** Solidity, JavaScript, Python, Go;
- **Tools & Platforms:** Hardhat, Truffle, Foundry, MythX, Ethereum Virtual Machine (EVM), React;
- **Layer2 Solution:** Ploygon;
- **Libraries/APIs:** Node.js, ether.js, web3.js, Openzepplin;
- **CI/CD Tools:** Jenkins, Git, Docker;
- **Machine Learning Skills:** Machine learning algorithms, Generative models, System Design & Developments;
- **Generative AI Tools:** GANs, Stable Diffusion, SD inpaint, Deepfloyd-if, SDXL, Fine-Tuning (DreamBooth, Lora);
- **Certifications:** AWS Certified Machine Learning-Specialty, Certified Artificial Intelligence (AI) Application Engineer (Advanced) by MIIT;
- **Awards:** Sliver modal at the Kaggle Competition(Kaggle-LLM Science Exam);
- **Languages:** Chinese (native), English (full professional proficiency, IELTS 6.5).

EXPERIENCE

360DApp   **Remote**
Smart Contract Engineer   *Mar 2023 – Mar 2024*
- Participated as a Smart Contract Developer in designing and implementing smart contracts for **DeFi** platform on **Polygon**;
- Assisted in the migration of legacy code to newer frameworks, enhancing maintainability and codebase stability while minimizing technical debt;
- Implemented a **gas optimization strategy** that reduced transaction costs by 30%, enhancing the overall user experience and attracting more developers to the platform;
- Conducted **security audits** on existing blockchain projects, identifying and mitigating critical vulnerabilities, resulting in a 50% reduction in potential security threats and ensuring data integrity.

Difyswap   **Remote**
Smart Contract Engineer   *May 2022 – Feb 2023*
- Led the development of smart contracts for handling project applications, **NFT sales**, and distribution processes;
- Implemented a complete application and review workflow for project feasibility and compliance;
- Enhanced user interface integration with smart contracts, enabling straightforward NFT transactions and management.

Cisco Systems (China) Research & Development Co., Ltd.   **Hangzhou, China**
Machine Learning Engineer   *Apr 2020 – May 2022*
- Conducted research on various image and video generation algorithms, compared (KPIs), finalized the technological choice, and designed image processing pipelines and video processing pipelines;
- Spearheaded multiple deep learning projects, focusing on the development and training of generative models;
- Utilized TensorRT to enhance inference speed by 20%;
- Re-trained models based on specific datasets and tuned hyperparameters to improve model performance.

Cisco Systems (China) Research & Development Co., Ltd.   **Hangzhou, China**
MacOS Software Engineer   *Apr 2019 – Apr 2020*
- Responsible for **continuous integration** of Webex.app and daily maintenance of the packaging pipeline;
- Maintaining a series of methods for launching MacOS apps: URL Protocol, extension, and installation package start-up, etc;
- Introduced multithreading for packaging apps, resulting in a 60% increase in packaging speed.

EDUCATION

Zhejiang University   **Hangzhou, China**
Master's degree in Electronics and Communication Engineering   *Sep 2016 – Jul 2019*
- **Main Courses:** Fundamental and Applications of Cloud Computing, Electronic and Information Engineering Technology Management.

Jilin University   **Jilin, China**
Bachelor's degree in Information Engineering   *Sep 2012 – Jul 2016*
- **Honors:** The Second-level Scholarship in Academic Year of 2015 – 2016; The Third-level Scholarship in Academic Year of 2014 – 2015; The Third-level Scholarship in Academic Year of 2012 – 2013;
- **Main Courses:** Computer Network Technology, Program Design and Programming, Object-Oriented Programming in C++ Lab.

PROJECTS

Yield Farming (360DApp)   *Jun 2023-Mar 2024*

- **Developed a decentralized yield farming smart contract**, enabling users to stake LP tokens and earn ERC20 tokens securely and efficiently;
- **Crafted sophisticated reward distribution logic** that calculates and disburses rewards based on the amount staked and the duration, ensuring fair and precise allocations;
- **Conducted comprehensive testing of smart contracts** including unit and integration tests to identify and mitigate vulnerabilities;
- **Ensured seamless integration of smart contracts** with frontend interfaces and backend servers, significantly enhancing user experience and interface responsiveness.

Decentralized Token Sale&Airdrop Platform (360DApp)   *Mar 2023 – Jun 2023*

- **Developed Polygon-based smart contracts** to facilitate Token Sales&Airdrop , encompassing user registration, token allocation, and ETH transactions;
- **Implemented a real-time dynamic pricing mechanism** to adjust token prices based on Ethereum market fluctuations, ensuring equitable and stable pricing;
- **Conducted comprehensive security audits and vulnerability assessments** to ensure the integrity of smart contracts, while incorporating OpenZeppelin libraries to effectively mitigate common security risks;
- **Led comprehensive testing**, including unit and integration tests.

NFT Launchpad（Difyswap）   *May 2022 – Feb 2023*

- **Developed Ethereum smart contracts** for trading ERC721 tokens, integrating complex asset management and security protocols;
- **Enhanced contract security** using OpenZeppelin tools; optimized gas usage and transaction efficiency to improve platform performance;
- **Designed and implemented dynamic fee allocation logic** to ensure fairness and transparency in transaction charges;
- **Collaborated with front-end teams** to ensure smooth integration of contracts, enhancing user interface and experience.

Video Style Transfer Algorithm (Cisco)   *Jan 2021 – Mar 2022*

- **Led the development of SCTAda**, a GAN-based video style transfer model, achieving high-quality, realistic content generation with coherent styling;
- **Orchestrated model training** with extensive datasets and optimized parameters for enhanced performance;
Publications: Liu, N. Dynamic Style Adaptation Network: A Comprehensive Approach for Video Style Transfer. International Conference on Image, Algorithms, and Artificial Intelligence (ICIAAI2023), SG, August 11, 2023.

Quality Enhancement for Images and Videos(Cisco)   *Apr 2021 - Nov 2021*
- **Enhanced digital images** processing by applying advanced techniques for deblurring, color correction, and character restoration;
- **Improved videos quality** through deblurring, applying super-resolution techniques, and frame interpolation;
- Introduced motion guidance into video generation to control the movement of generated characters.

Multi-headed Computer Vision Model (Cisco)   *Apr 2020 – Feb 2021*
- **Developed 'Ladon,'** a multi-functional computer vision model, integrating background segmentation and gesture recognition using MobileNetV2 and DeepLabV3Plus for enhanced accuracy;
- **Enhanced the segmentation model** leveraging MobileNetV2 and DeepLabV3Plus;
- **Applied YOLO V3** model for Single Shot Landmark Detection.

Continuous Integration Module Developer for Webex on macOS(Cisco)   *Apr 2019 – Apr 2020*
- **Engineered macOS application support** for the Mac Arm64 architecture, significantly enhancing Webex's performance on new hardware;
- **Developed the signing and notarization** process for the macOS application using Swift;
- **Crafted Python scripts** to encapsulate CI tasks, providing utilities for creating .pkg and .dmg files;
- **Optimized CI scripts** by parallelizing time-intensive packaging steps, achieving a 60% improvement in package speed.