HAU CHU

New York, NY | (+1) 346-448-9865 | hc793@cornell.edu | GitHub | LinkedIn

EDUCATION

Cornell Tech at Cornell University, New York, NY   Aug 2022 - Expected May 2024
Jacobs Technion-Cornell Dual Master of Science in Computer and Information Science | GPA: 3.54
Relevant Coursework: Blockchain (Prof. Ari Juels), Cryptography, Full-stack System, Machine Learning Engineering, HCI and Design
Laboratory: Signal, Information, Network, Energy Lab, led by Prof. Anna Scaglione

National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan   Sep 2016 - Jan 2020
Bachelor of Science in Computer Science and Information Engineering | GPA: 3.76
Relevant Coursework: Data Structure, Algorithms, Object-Oriented Programming, Operating System, Databases, Linear Algebra, Statistics, Full-stack Web Design and Development(AngularJS)

WORK EXPERIENCE

Legitified.io, Founding Blockchain Developer, New York, United States (part-time)   Nov 2023 – Present
- Led building an MVP that brings the new experience of luxury exchange with secure, seamless transactions and authentic item verification on the Avalanche network with PBT, ERC721 protocols, and RFID tags.

Solana Labs Inc., Software Engineer Intern, Chicago, United States   May 2023 - Aug 2023
- Enabled Solana governance program to support compressed NFT (cnft-voter) as voting power to enable over 100k users to govern and manage DAOs with gas fees lower than 100 USD, powered with **Rust** and **Anchor**.
- Integrated Realm UI platform with cnft-voter plugin via **Next.js** and **TypeScript**, enhancing system compatibility.
- Refactored frontend code with React hooks and **Zustand** state management, improving 15% website performance.

BAVE Blockchain Technology Company, Frontend Engineer, Taipei, Taiwan   Apr 2022 - Jun 2022
- Transited Web3 codebase from WebPack with Javascript to Vite with Typescript, achieving a 20% reduction in the build process.
- Established 5 responsive single-page design with **React**, **Tailwindcss,** and **Node.js** within 2.5 months; integrated APIs for front-end to back-end communication, averaging 800 views per website.

National Taiwan University, Deep Learning Research Assistant, Taipei, Taiwan   Aug 2020 - Aug 2021
- Proposed an approach for multi-view multi-human 3D pose estimation under severe occlusion, utilizing key-point detection models and geometric computer vision in **Python**, achieving 96.8% PCP score (1% enhancement to previous state-of-the-art).
- Solved CNNs' limitations in modeling long-range dependency for image segmentation by alternating **U-Net** encoder with **Transformer**, improving accuracy from 77% to 81% on the 3D Dice Similarity Coefficient Metric.
- Researched Knowledge Distillation and Backward Compatible Training for fine-grained image retrieval in the incremental setting.

HACKATHON & AWARDS

UC Berkley ZK Hackathon – ZK Application Track - 2nd prizes, Compact Certificate
- Innovated a state-compressed algorithm for exporting short, lighted state proof to increase cross-chain interoperability.
- Programmed smart contract that allowed cross-chain message communication with **Chainlink CCIP**.
- Implemented Poseidon Hash Function, EdDSA (Baby Jubjub), Merkle Tree verification, and **Zero Knowledge Proof**.

OSSHack (Open Source as Software) - Best Performance Improvement Award
- Developed a serverless real-time slot reservation system for Cal.com, leveraging web socket and tRPC framework to efficiently eliminate user scheduling conflicts and enhance the booking experience.

EthOnline 2023 - Best Use Case on Scroll Network, ClubCast
- Created a clubhouse platform where members can vote for the podcast topics within a DAO system.
- Provided React SDK to deploy club membership contracts, and upload media to Web3 Storage to improve user experience.
- Set up blockchain **Oracle** to keep track of the off-chain social reviews in order to provide on-chain customer service.

PROJECTS

NFT Networking Platform, (TypeScript, NextJs, Solidity, Python Firebase)   Sep 2023
- Built out a **Web 3.0** social platform with the integration of **Wagmi** wallet management and live-chat features using Python, Firebase backend, Typescript/NextJS frontend and **XMTP (External Message Transport Protocol)**.
- Led the frontend development and smart contract design in a 5-member team.

Full-Stack Nepal Charity Donation Platform, (Gatsby, React, Sanity, GraphQL)   Dec 2022 - Apr 2023
- Created a donation platform for Nepal charity to support education, health, and disaster relief causes.
- Developed static and dynamic pages using **Gatsby** and **GraphQL** as the backend to access data stored in the Sanity database.

TECHNICAL SKILLS

Coding Language	C, C++, Python (Scikit-learn, OpenCV, PyTorch, Pandas), Solidity, Rust, JavaScript, Typescript
Web Development	HTML, CSS (Tailwindcss), React, Node.js, Ethers.js, Web3.js, REST API, Next.js, GraphQL, Backend, Frontend, WebSocket, Webhook, Postman, tRPC, Wagmi, Viem
ToolKits	VS Code, Hardhat, Remix, Docker, Git, Firebase, CUDA, Anchor, Figma